

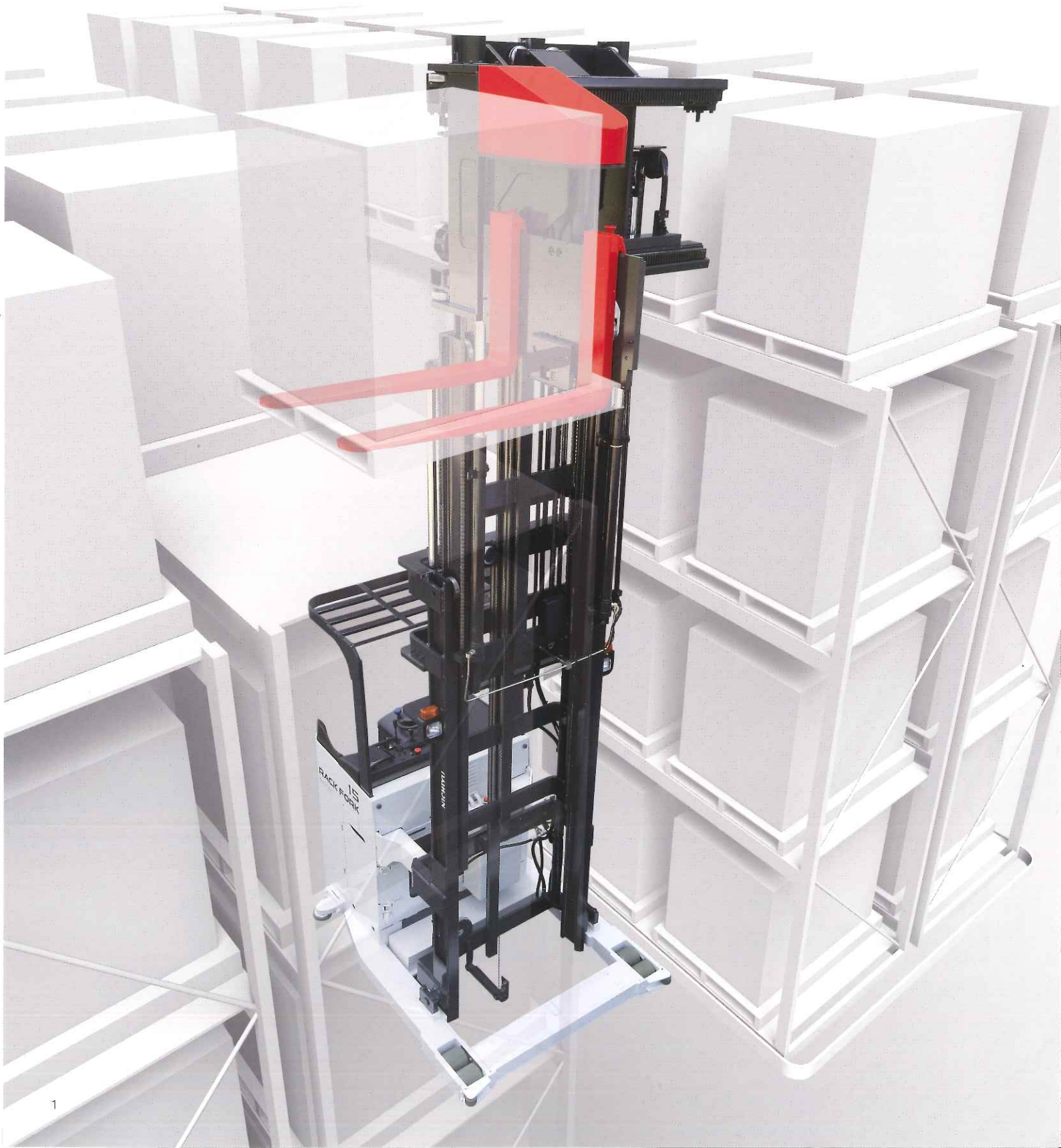
ELECTRIC LIFT TRUCK
RACK FORKLIFT TRUCKS

RFTL10-15 Series



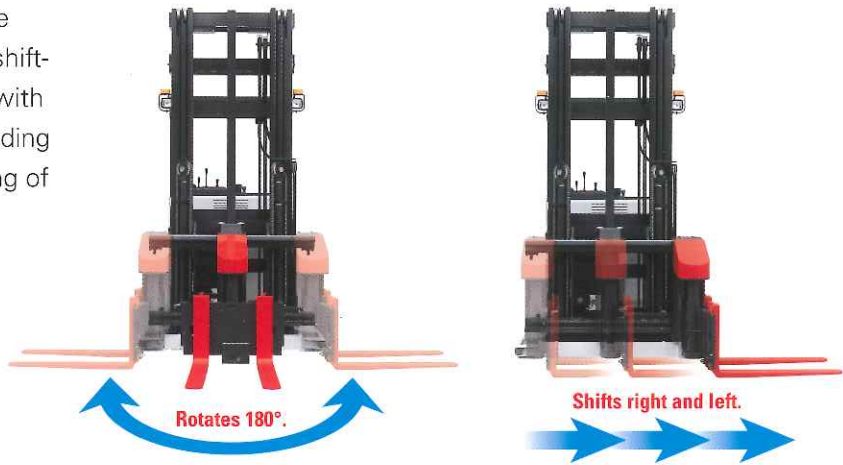
RACK FORK

*The total solution for higher, larger,
more efficient use of space.*



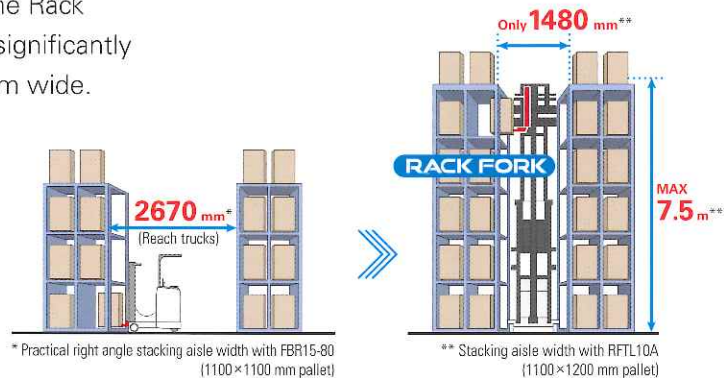
Offers Three-directional Loading

The Rack Fork Series handles loads from three directions by means of shift-and-rotate operation or with conventional forward loading and unloading. No turning of the truck is required.



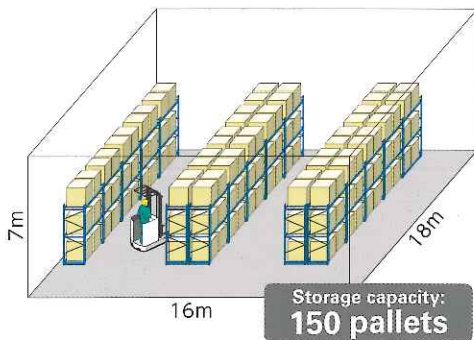
Accommodates Aisles Only 1480 mm Wide

Compared to reach trucks, the Rack Fork Series accommodates significantly narrower aisles only 1480 mm wide. Offers a maximum lift height of 7.5 meters.

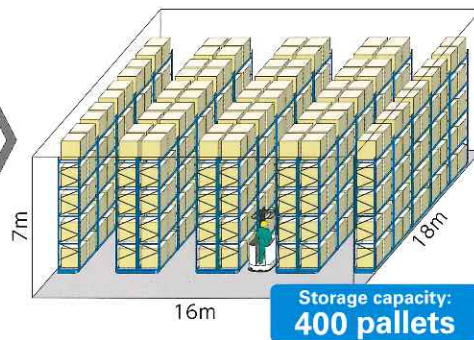


Advantages

Before (general reach trucks)



After RACK FORK



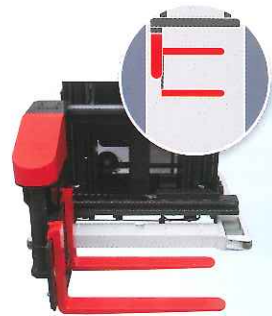
- Effective use of work space
- Greatly increase of storage capacity

RACK FORK

Now with AC control and electric turret head for enhanced functionality and extended operating time.



Photo: RFTL15A-80
with optional mast-mounted



Increased stability

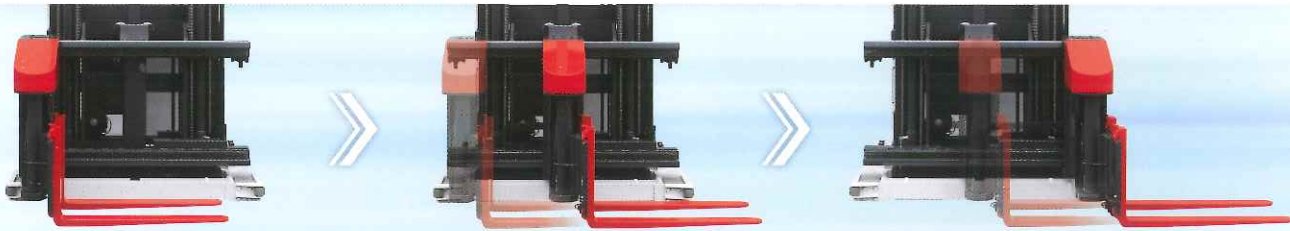
Special H steel and center guide rail are used for the mast. It results in great stability while operation at high lift position.



Advanced Electric Turret Head

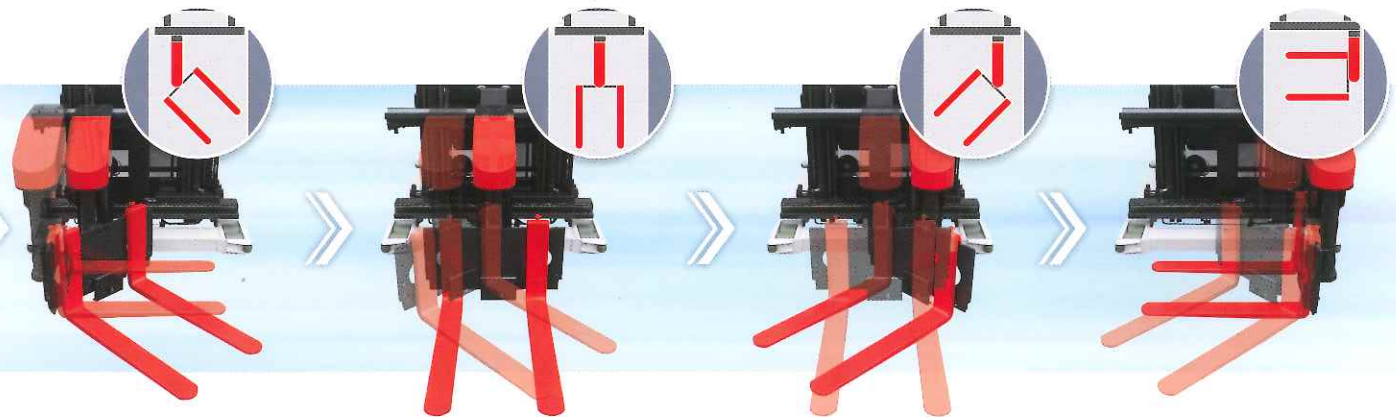
Minimizes the shock to the load while reducing "electric turret head" adopted in realizing the improvement of energy-saving and running resistance.

This innovation offers exceptionally smooth and quiet operation while providing greater energy efficiency.



The smooth rotating and shifting motion ensures fast operation safety. (RFTL10(A)-15(A))

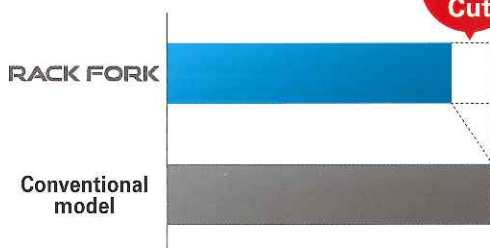
Shifting and rotating are interlocked and operated with a single lever. When no load is being carried, the head can be turned in an aisle. (Operations should be limited to within the range of vision.)



Energy saving

Great energy saving up to 12.5% compared to the previous model by the electrically powered shift and rotate operation.*
(RFTL10T-15T)

■ Power Consumption cut



*(RFTL10T, P mode)

More Comfortable Operation

Greatly reduced impact noise during lifting and lowering (soft ending, changing, and landing)

Soft ending (option)

Shockless at upper limit

Ensures a slow speed when approaching the highest point on the mast.

Soft changing

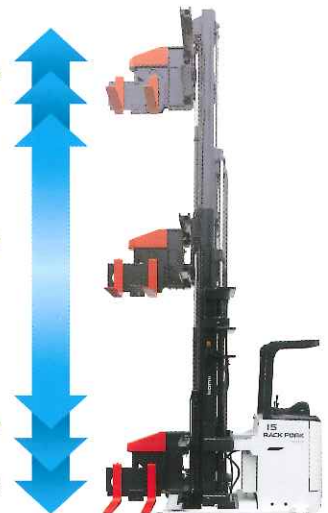
Shockless at changeover

With a three-stage mast, the lifting shock is reduced at the cylinder changeover during lifting and lowering.

Soft landing

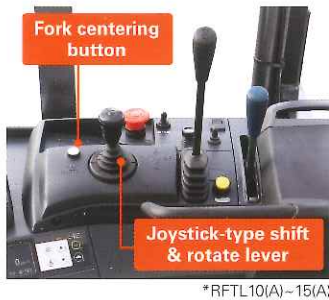
Shockless at landing

When the fork is lowered to 100mm from the ground, the lowering speed is slightly reduced and the impact noise is softened when the fork stops at the end of its range (unladen).



For More Comfortable Operation

The comfortable, ergonomically designed cockpit ensures hours of fatigue-free operation.



*RFTL10(A)~15(A)

Innovative joystick-type shift & rotate lever

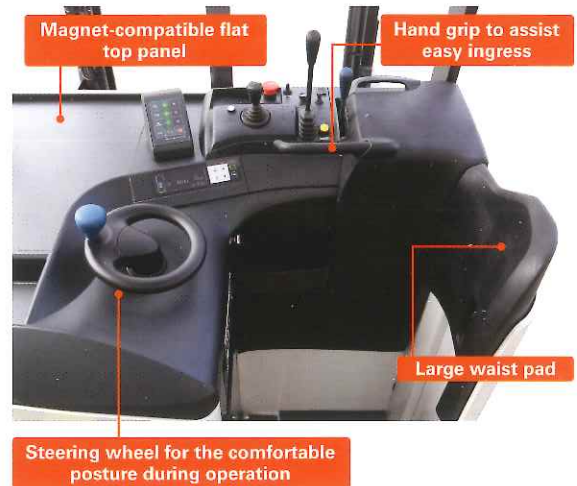
The innovative joystick enables single-lever activation of the shift & rotate mechanism. In addition, the electric turret head and smooth interlocking provide for smooth and efficient loading work.



*RFTL10T~15T

Triple-lever operation that feels just like a forklift

Each operation—lift, shift and rotate—is controlled by its own lever, all mounted in a row. This also enables simultaneous shift-and-rotate operation.



A display that's easier to view outdoors NEW

The transmissive LCD exhibits clear contrast that makes it easier to view and less likely to be affected by sunlight when used outdoors. What's more, the text is larger and the full dot display makes the on-screen information more legible.



The Eco switch contributes to increased energy-efficiency. NEW

In addition to P (Powerful), N (Normal) and C (Customize) modes, the new model features an Eco setting. In Eco mode, daily electricity consumption is cut by 15% by controlling maximum performance such as travel speed and lift speed.



Operation characteristics customizing system NEW

Through adjustments to the acceleration force, response, and accelerator lever characteristics, the vehicle's response to travel and hydraulic operation can be adjusted in many ways to accommodate specific usage requirements and the operator's skill.

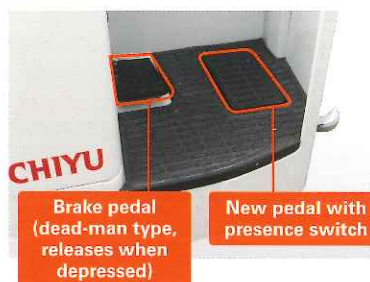


Low floor height



New pedal incorporating a presence switch NEW

The right side of the driver's platform incorporates an independent pedal with a presence switch. This ensures you can operate with maintaining a safe and stable posture, as this innovation prevents the right heel from protruding from the compartment.



Operation Interlock System (OIS) NEW

The display issues a warning when the operator is out of the compartment or not in the correct position for traveling or hydraulic operations. This innovation helps to prevent accidents and problems caused by erroneous operation and the like because it disables travel and hydraulic operations.

Passcode entry (optional) NEW

Even after the key is turned on, all operations can be locked out until the preset 4-digit passcode has been entered. This feature prevents accidents by eliminating forklift use by unauthorized persons.

Safer, More Secure Operation

Automatic lifting stop function for secure loading (optional)

The stage heights for stopping can be preset in six stages. Simply pulling the lift lever automatically stops the forks at the designated stage height.



A variety of operator-centered safety devices

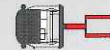
Various interlocks are provided as standard to prevent unintentional or accidental traveling and operation. (RFTL10(A)-15(A))

Fork positions for traveling

Fork right and left points
Shift-in left end Shift-in right end



Fork center point (loading operations)
Fork forward shift center (under 1.5m)



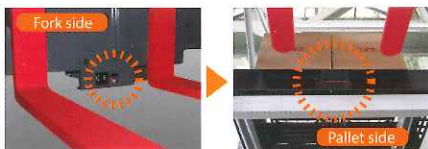
The interlock prevents travel when the forks are in any other position.

Fork view monitor (optional)

Camera & Monitoring System ensures a more secure unloading operation

This system captures the pallet emitted by laser beam with a small camera and displays it on a screen.

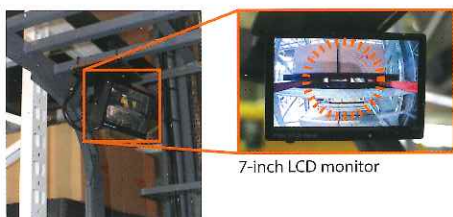
STEP 1 Check loads with the camera and laser beam



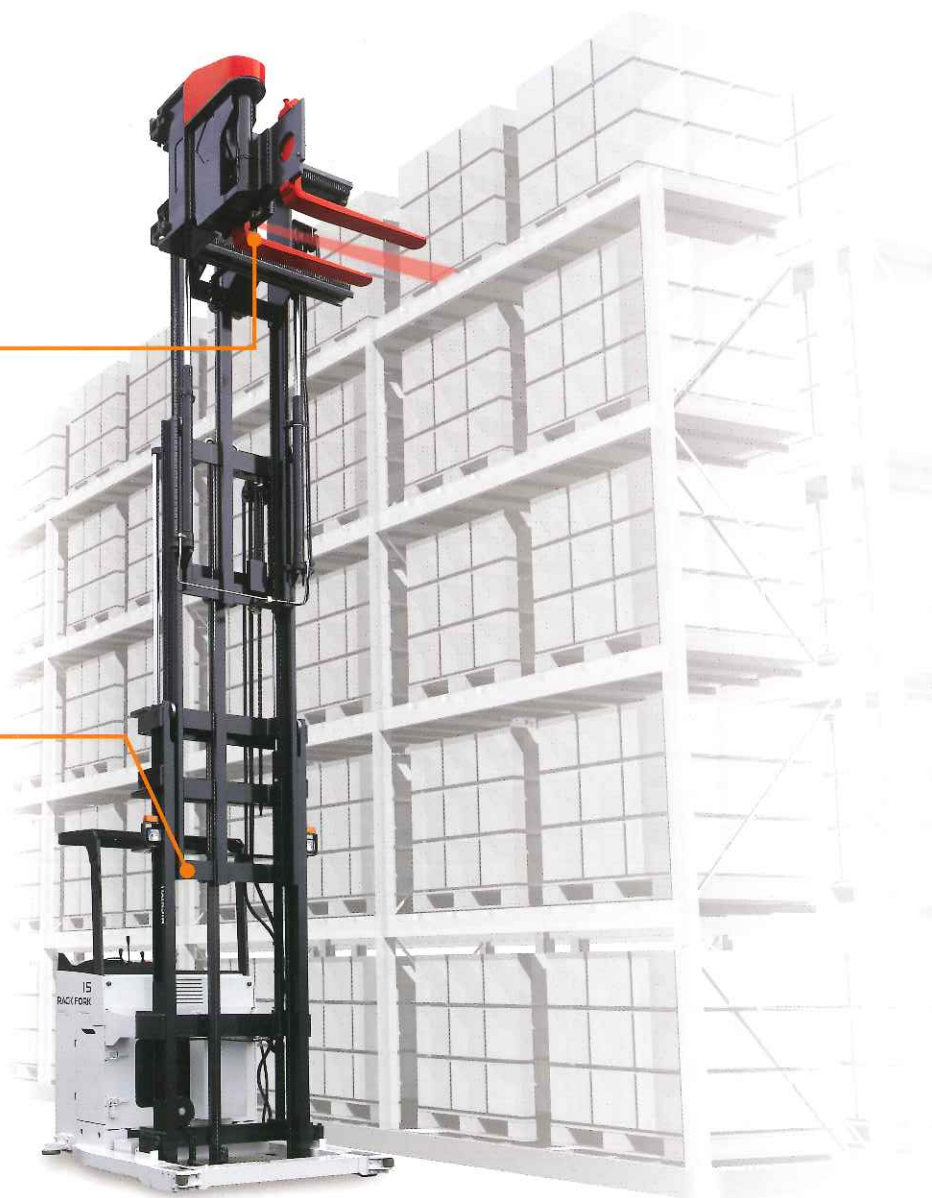
Laser beam emitting and camera monitoring start

STEP 2 Check the insertion point on the monitor and start unloading operation.

The pallet-insertion point is displayed on the monitor via the camera mounted to the base of the fork.



7-inch LCD monitor



Line up

RACK FORK

Suitable model can be selected among the variety of 1000kg to 1500kg, depend on your workspace or intended use.

RFTL10/12/15-80
RFTL10A/12A/15A-80
RFTL10T/12T/15T-80



Photo: RFTL15A-80

Pallet Picker

Perform double duties in both pallet handling and picking operations.
This is the optimal approach for the multiple, small-lot products storage warehouse.

RFTP10/12-75
RFTP10C-75



Photo: RFTP10-75

The Best Systems for Your Logistics Site

RACK FORK & Pallet Rack (Order Picker, Walkie Trucks)

For the operation of entering with pallet and dispatching with case



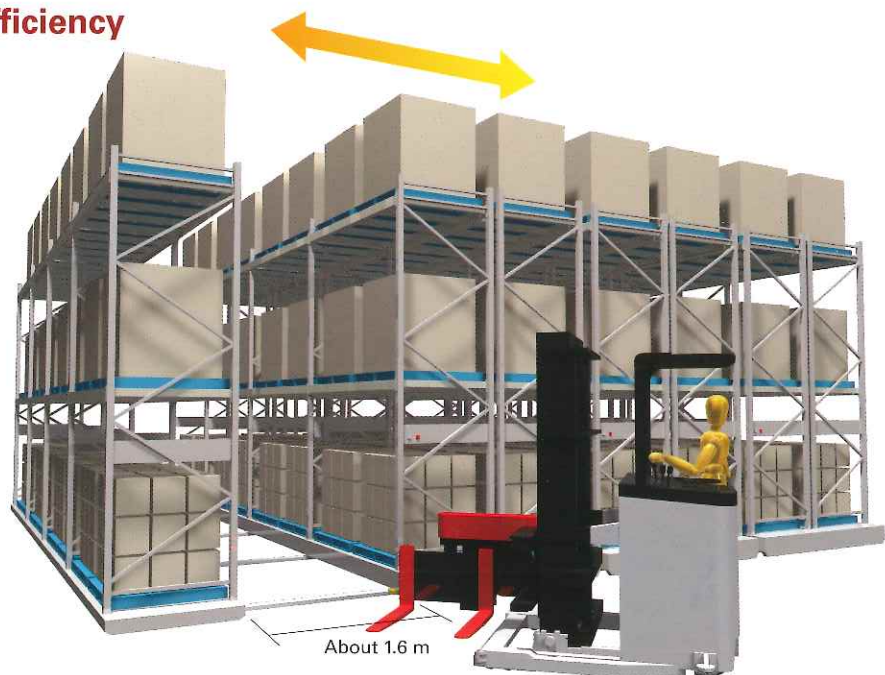
The Rack Fork truck can be used for warehousing with a pallet load, an order picker for carry out case picking, and the walkie trucks for case picking from the bottom-most stage. Because the aisle width requirement is only about 1.5 meter, the same as that of a forklift, storage efficiency is increased and picking from both sides is possible. Thus, you will save space and work more efficiently.

RACK FORK & an Electric Motor-powered Movable Shelving System

Maximum space efficiency

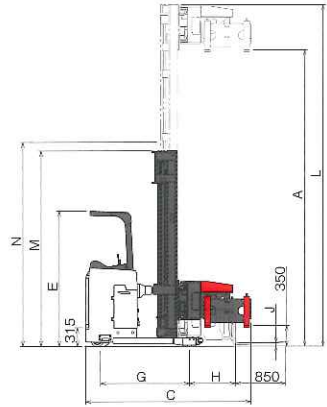
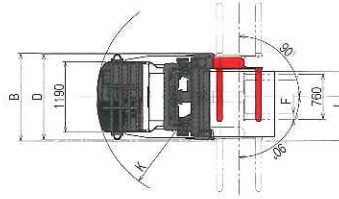
Maximize your storage capacity by combining an electrically powered movable shelving system that requires only one aisle. The movable shelves can be opened and closed easily by remote control while the operator rides on the Rack Fork truck. This is an optimal design for sites requiring the most efficient use of capacity in a limited space.

We provide the best systems for commercial warehouses, freezer warehouses and various other logistics sites.



RACK FORK

RFTL / RFTL-A



Rack Fork Specifications

		Unit	RFTL10	RFTL12	RFTL15	RFTL10A	RFTL12A	RFTL15A	
Performance	Capacity	kg	1000	1200	1500	1000	1200	1500	
	Load dimensions (L x W)	mm	1100x1200						
	Load center	mm	550						
	Lift height	A mm	A						
	Lift height (Maximum)	mm	6500			7500			
	Lifting speed	Laden	mm/s	330	290	250	310	270	250
		Unladen	mm/s	390	330	290	350	290	250
	Traveling speed	Laden	km/h	9.5	9	8	9.5	8.5	8
		Unladen	km/h	10	9.5	8.5	10	9	8.5
	Rotating speed of forks	s/180°	12	14	13	12	14	13	
Shift speed	mm/s	240	230	220	240	230	220		
Main aisle width (calculated)	mm	3180	3160	3330	3320	3310	3330		
Stacking aisle width	B mm	1480	1580		1480	1580			
Dimensions	Overall length	C mm	2778		2928				
	Overall width (with across guide rollers)	D mm	1450	1550		1450	1550		
	Overhead guard height	E mm	2280						
	Fork length	mm	850						
	Fork width	F mm	100	122		100	122		
	Wheelbase	G mm	1500			1650			
	Front overhang	H mm	770	775	790	770	775	790	
	Shift stroke	I mm	1175	1265	1200	1175	1265	1200	
	Lowered fork height	J mm	60 (to bottom of fork)						
	Minimum turning radius	K mm	1760		1910	1910			
Tire	Drive	mm	φ380*165 Rubber						
	Load	mm	φ127*92 Urethane	φ140*127 Urethane		φ127*92 Urethane	φ140*127 Urethane		
	Casters	mm	φ204*76 Rubber			φ204*76 Urethane			
Control	Travel	Control method	Inverter						
		Hydraulic	11						
	Motors	Control method	Inverter						
		Steering	0.3						
	Control method	FET chopper							
Shift & Rotate drive method	Electric / FET chopper								
Battery	Battery capacity 48 V	Ah/5HR	320			370			
	Charger Type	Built-in 4.3 kVA / Stationary 4.7kVA			Built-in 5.2 kVA / Stationary 6.5kVA				

Lift height (mm)		Model	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500
Overall height (mm)	L	RFTL10	3765	4265	4765	5265	5765	6265	6765	7265	-	-
		RFTL10A	3765	4265	4765	5265	5765	6265	6765	7265	7765	8265
		RFTL12	3765	4265	4765	5265	5765	6265	6765	7265	-	-
		RFTL12A	3765	4265	4765	5265	5765	6265	6765	7265	7765	8265
		RFTL15	4015	4515	5015	5515	6015	6515	7015	7515	-	-
		RFTL15A	4015	4515	5015	5515	6015	6515	7015	7515	8015	8515
Height of mast (mast lowered) (mm)	M	RFTL10	2295	2545	2795	3045	3295	3545	3795	4045	-	-
		RFTL10A	2295	2545	2795	3045	3295	3545	3795	4045	4295	4545
		RFTL12	2295	2545	2795	3045	3295	3545	3795	4045	-	-
		RFTL12A	2295	2545	2795	3045	3295	3545	3795	4045	4295	4545
		RFTL15	2545	2795	3045	3295	3545	3795	4045	4295	-	-
		RFTL15A	2545	2795	3045	3295	3545	3795	4045	4295	4545	4795
Mast height during traveling (at 350 mm lift) (mm)	N	RFTL10	2440	2690	2940	3190	3440	3690	3940	4190	-	-
		RFTL10A	2440	2690	2940	3190	3440	3690	3940	4190	4440	4690
		RFTL12	2440	2690	2940	3190	3440	3690	3940	4190	-	-
		RFTL12A	2440	2690	2940	3190	3440	3690	3940	4190	4440	4690
		RFTL15	2690	2940	3190	3440	3690	3940	4190	4440	-	-
		RFTL15A	2690	2940	3190	3440	3690	3940	4190	4440	4690	4940
Capacity (kg)		RFTL10	1000	1000	1000	1000	1000	870	800	750	-	-
		RFTL10A	1000	1000	1000	1000	1000	1000	1000	1000	900	800
		RFTL12	1200	1200	1200	1170	1070	1000	950	900	-	-
		RFTL12A	1200	1200	1200	1200	1200	1150	1100	1050	1020	1000
		RFTL15	1500	1500	1450	1330	1230	1070	970	900	-	-
		RFTL15A	1500	1500	1500	1500	1350	1230	1150	1080	1030	1000
Service weight (kg)		RFTL10	3670	3720	3790	3860	3930	4160	4210	4260	-	-
		RFTL10A	3870	3930	4140	4220	4320	4560	4640	4700	4760	4840
		RFTL12	3820	3870	4070	4150	4220	4300	4360	4410	-	-
		RFTL12A	3960	4020	4230	4310	4640	4730	4790	4870	4930	5020
		RFTL15	4170	4250	4480	4560	4660	4720	4780	4840	-	-
		RFTL15A	4240	4320	4630	4710	4810	4870	4930	4990	5070	5140

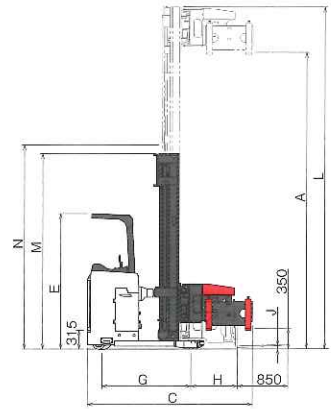
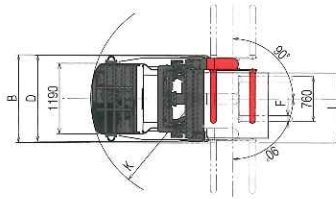
- Notes: 1. The above drawing and table indicate a pallet size of 1100 (L) X 1200 (W) mm. Different pallet sizes would result in changes in the above figures.
 2. The figures in the above figure and table apply to models with a standard mast (two-stage mast). Specifications differ for models with a three-stage mast.
 3. Different pallet sizes require changes in aisle width, shift stroke, and boom size.
 4. The standard guide roller is installed only on the lower part; for unit with up to 6000 mm mast, installed on the upper part as well for unit with higher than 6000 mm mast.

5. The rack height determines the height of the upper guide roller position.
 The width of the guide roller is calculated as shown below.
 Width of upper guide roller (when cargo is aligned to rack edge) = Stacking aisle width - 40
 Width of upper guide roller (when cargo overhangs rack) = Stacking aisle width + 20
 Width of lower guide roller = Stacking aisle width - 30
 6. Clearance is not included in the main aisle width calculation.
 * All specifications are subject to change without notice due to further improvement or modifications.

RACK FORK

T Series

RFTL-T



Rack Fork T Specifications

		Unit	RFTL10T	RFTL12T	RFTL15T	
Performance	Capacity	kg	1000	1200	1500	
	Load dimensions (L x W)	mm	1100x1200			
	Load center	mm	550			
	Lift height	A mm	A			
	Lift height (Maximum)	mm	6500			
	Lifting speed	Laden	mm/s	330	290	250
		Unladen	mm/s	390	330	290
	Traveling speed	Laden	km/h	9.5	9	8
		Unladen	km/h	10	9.5	8.5
	Rotating speed of forks	s/180°	9	10	11	
	Shift speed	mm/s	240	230	220	
	Main aisle width (calculated)	mm	3170	3150	3330	
Stacking aisle width	B mm	1480	1580			
Dimensions	Overall length	C mm	2778		2928	
	Overall width (with across guide rollers)	D mm	1450	1550		
	Overhead guard height	E mm	2280			
	Fork length	mm	850			
	Fork width	F mm	100	122		
	Wheelbase	G mm	1500		1650	
	Front overhang	H mm	780		815	
	Shift stroke	I mm	1180		1280	
	Lowered fork height	J mm	60 (to bottom of fork)			
	Minimum turning radius	K mm	1760		1910	
Tire	Drive	mm	φ 380x165 Rubber			
	Load	mm	φ 127x92 Urethane	φ 140x127 Urethane		
	Casters	mm	φ 204x76 Rubber			
Control	Motors	Travel	kW			
		Control method	Inverter			
		Hydraulic	kW			
		Control method	Inverter			
		Steering	kW			
Control method	FET chopper					
Shift & Rotate drive method	Electric / FET chopper					
Battery	Battery capacity 48 V	Ah/5HR	280		320	
	Charger Type	Built-in 4.3 kVA / Stationary 4.7kVA				

Lift height (mm)	Model	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	
Overall height (mm)	L	RFTL10T	3765	4265	4765	5265	5765	6265	6765	7265	-	-
		RFTL12T	3765	4265	4765	5265	5765	6265	6765	7265	-	-
		RFTL15T	4015	4515	5015	5515	6015	6515	7015	7515	-	-
Height of mast (mast lowered) (mm)	M	RFTL10T	2295	2545	2795	3045	3295	3545	3795	4045	-	-
		RFTL12T	2295	2545	2795	3045	3295	3545	3795	4045	-	-
		RFTL15T	2545	2795	3045	3295	3545	3795	4045	4295	-	-
Mast height during traveling (at 350 mm lift) (mm)	N	RFTL10T	2440	2690	2940	3190	3440	3690	3940	4190	-	-
		RFTL12T	2440	2690	2940	3190	3440	3690	3940	4190	-	-
		RFTL15T	2690	2940	3190	3440	3690	3940	4190	4440	-	-
Capacity (kg)	RFTL10T	1000	1000	1000	1000	1000	870	800	750	-	-	
	RFTL12T	1200	1200	1200	1170	1070	1000	950	900	-	-	
	RFTL15T	1500	1500	1450	1330	1230	1070	970	900	-	-	
Service weight (kg)	RFTL10T	3590	3640	3710	3780	3850	4070	4130	4180	-	-	
	RFTL12T	3740	3790	4000	4070	4140	4230	4280	4330	-	-	
	RFTL15T	4160	4230	4470	4550	4640	4710	4770	4820	-	-	

- Notes: 1. The above drawing and table indicate a pallet size of 1100 (L) X 1100 (W) mm. Different pallet sizes would result in changes in the above figures.
 2. The figures in the above figure and table apply to models with a standard mast (two-stage mast). Specifications differ for models with a three-stage mast.
 3. Different pallet sizes require changes in aisle width, shift stroke, and boom size.
 4. The standard guide roller is installed only on the lower part; for unit with up to 6000 mm mast, installed on the upper part as well for unit with higher than 6000 mm mast.

5. The rack height determines the height of the upper guide roller position.
 The width of the guide roller is calculated as shown below.
 Width of upper guide roller (when cargo is aligned to rack edge) = Stacking aisle width - 40
 Width of upper guide roller (when cargo overhangs rack) = Stacking aisle width - 20
 Width of lower guide roller = Stacking aisle width - 30
 6. Clearance is not included in the main aisle width calculation.
 * All specifications are subject to change without notice due to further improvement or modifications.

Rack Fork / Rack Fork T Specifications and Equipment

Item	Rack Fork						Rack Fork T		
	RFTL10	RFTL12	RFTL15	RFTL10A	RFTL12A	RFTL15A	RFTL10T	RFTL12T	RFTL15T
Control	Traveling AC control								
	Hydraulic AC control								
	Shift & rotate Electric drive method								
	Smooth interlocked rotating								
Load limits	L (maximum) mm						1400		
	W (maximum) mm						1600		
Safety Devices	Soft landing								
	Soft changing (available for three-stage masts only)								
	Soft ending								
	Neutral safety								
	Safety cruise								
	Auto power off								
	Various traveling interlocks								
	Operation Interlock System (OIS) NEW								
Regenerative Control	Intelligent power module								
	Plugging								
	Coasting								
Guide Roller	Hydraulic operating								
	Lower guide rollers (4 pcs.)								
	Upper guide rollers (Standard for lift heights exceeding 6000 mm)								
Handling Aids	Modification of guide roller width								
	Semi auto stack (AB switch, 6 stages each)								
	Fork view monitor								
	Travel stop position mark								
	Lift stop position mark								
	Address pointer								
Display / Setting	Hourmeter / Odometer (switchable)								
	Clock with calendar								
	Battery discharge indicator								
	Speed meter, turtle mode set speed								
	Operation characteristics customizing system NEW								
	Eco switch NEW								
	Passcode entry NEW								
Charger	Load indicator								
	Built-in charger								
AC Plug with handle NEW									

Batteries

Voltage	Item	Capacity	Rack Fork						Rack Fork T		
			RFTL10	RFTL12	RFTL15	RFTL10A	RFTL12A	RFTL15A	RFTL10T	RFTL12T	RFTL15T
48V	280Ah/5HR										
	320Ah/5HR		○	○					○	○	○
	370Ah/5HR		△	△	○	○	○	○	△	△	△

- Standard equipment
 - △ Options
- Some combinations of specifications may not be available. Please contact your Nichiyu dealer.
• All specifications are subject to change without notice.

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

MITSUBISHI NICHIYU FORKLIFT CO., LTD.

1-1, 2-Chome, Higashikotari, Nagaokakyo-shi, Kyoto 617-8585 JAPAN
URL: <http://www.nmf.co.jp/en/>

CAT No.OSD102/OSD113A80-1 Printed in Japan 5000/1503(SK)