

FR-VII

Brand
New



ELECTRIC REACH TRUCKS

TCM

The TCM electric reach trucks, designed with new values.

Introducing the new FR-VII series, the electric reach trucks equipped with new functions and performances to go beyond conventional reach trucks.

With the new functions and improvements, we have upgraded traveling stability, operability, economical efficiency and operator comfort.

TCM has redesigned this series based on customer requirements, which resulted in enhanced features.

Improved traveling stability

- Auto-lock suspension control system
- Front wheel brakes
- AC drive control system
- Improved frame rigidity

Improved operability

- AC load handling control system
- Small-diameter steering wheel
- Reduced operating fatigue
- Traction control system

Improved operator comfort

- Wider operators compartment
- Waist & hip support
- Easy battery maintenance
- Cast steel front wheel protector
- Integrated dashboard design

Improved economical efficiency

- Longer operating hours
- Auto power off system
- Truck-mounted charger with timer (Option)



※ Features and equipment
may vary depending on market.

v a U P u e

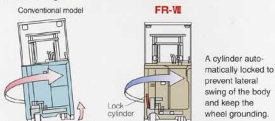
Improved traveling stability and operability. Employs advanced functions to further evolve the electric reach trucks.

Improved traveling stability

Auto-lock suspension control system

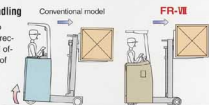
A controller constantly monitors the traveling and load handling conditions, and the rear wheel suspension is automatically locked accordingly.

When turning



When load handling

This system also controls cross direction stability, and offers higher level of stability.



Wider rear wheel tread

A wider rear wheel tread is adopted together with auto-lock suspension control system to ensure higher body stability.

Conventional model
635mm

FR-VII
680mm

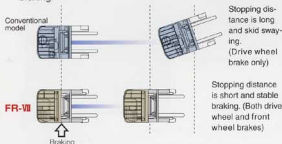
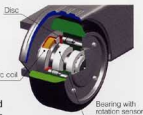
(1.5 ton model)



More **UP**

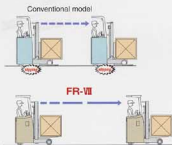
Front wheel brakes

The FR-VII is equipped with electromagnetic-controlled front wheel brakes to ensure high level of brake performance when carrying heavy loads and at slippery locations. This reduces stopping distance and prevents skid swaying during braking.



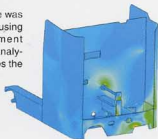
AC drive control system

Drive wheel slipping is controlled when starting or acceleration. This system automatically adjusts the traction of drive wheel to the load and floor condition. AC motor also enables more precise control than DC motor, so start-up shock is greatly reduced. AC control also provides regenerative braking when the accelerator lever is moved to the neutral while traveling, besides conventional regenerative braking system.



Improved frame rigidity

The frame structure was optimally designed using FEM (Finite Element Method) strength analysis and this improves the frame rigidity by 20% over conventional model.



Improved operability

AC load handling control system

AC motor enables more precise control and ensures top-class load handling performance.

Lifting speed (1.5 ton model)

	Without load	With load
Conventional model	530mm/s	310mm/s
FR-VII	570mm/s (8%up)	330mm/s (7%up)

Small-diameter steering wheel

The steering wheel is 35 mm smaller compared with conventional model, and requires even less operating strength, and enhances maneuverability.



Conventional model
130mm

FR-VII
95mm

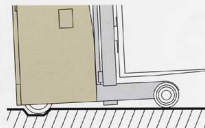
Reduced operating fatigue

Operating force of the control lever is 20% less than that of conventional model. This significantly reduces operator fatigue during load handling operation.



Traction control system

When climbing slopes or getting out of the concaves of the road, the controller automatically increases the traction of drive wheel.



A new appearance of electric reach trucks, with superior economical efficiency and operator comfort.

Improved economical efficiency

Longer operating hours

The FR-VII achieves 8.5 hours of operation per charge (Based on 55% work ratio) by minimizing battery power consumption during load handling operation. The three types (accelerator off, switch back, braking) of braking regeneration return the energy to the battery to lengthen operating hours.

Auto power off system

This system will automatically shut off the main power to save the battery power in case the truck is not operated for 15 minutes even if the main key switch is "ON". The hour meter also stops automatically to enable accurate operation management.

Truck-mounted charger with timer (Option)



This charger enables you to set the start time of charging beforehand. This enables the optimal charging state when starting work after holiday.

Improved operator comfort

Wider operators compartment

Changes in the compact AC motors layout and compact design of the side cover enlarges operators compartment. This compartment is roomy and provides ease of access.



Comparison of 1.5 ton model

	Floor depth	Floor width
Conventional model	390mm	475mm
FR - VII	420mm	530mm

G r o w u p



Waist & hip support

The waist & hip support is optimal shape studied from 3D viewpoint, and equipped with vertical slide adjustment by 30 mm. This design



firmly supports the operator's body, and enables work with a stable posture.

Easy battery maintenance



Batteries are pulled forward, out of the compartment for easy access. This makes maintenance and replacement easy, quick and safe with little fatigue.

Cast steel front wheel protector

The edge of front wheel protector is rounded, and this prevents reach-legs and pallets from scratching during reach retraction of pallets.



Integrated dashboard design

Functional dashboard panel is uniformly made and it provides better waterproofing property. Rubber boots are applied for control levers to prevent splash of water and dust from going inside the panel.

(The panel uses material with good recycling efficiency.)



Turn signal with self-canceling mechanism (Option)

This mechanism detects steering wheel rotation and automatically cancels the turn signal.

OPTION COLOR Yellow



Some items and components in photo may be optional.