

TCM

FRSB-VIII

Electric Forklift Trucks **1.4 to 2.5 tons**

Sit-on Reach Model



FRSB-VIII

TCM reach trucks have evolved to offer a new dimension of economy, safety and operator comfort.

TCM FRSB-VIII electric sit-on reach truck series, with capacities from 1.4 to 2.5 tons, features longer run times per battery charge, a higher level of safety and better operator comfort, inheriting the excellent basic performances of our well-reputed models. Furthermore, with a variety of advanced features including a load meter, deluxe suspension operator's seat, and auto power-off device, the new reach truck series improves overall efficiency, comfort and environmental-friendliness as well.



01 ECONOMY

02 SAFETY

03 COMFORT

ECONOMY

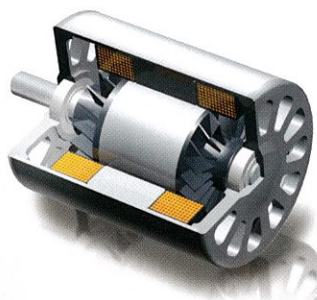
Longer operating time reduces handling costs while improving overall efficiency.



Longer Battery Run Time

Smaller motors and a regenerative braking feature save a great deal of energy and deliver 11.5 hours run time on a single battery charge.

The use of smaller motors reduces power consumption. The regenerative braking system takes full advantage of the AC motor characteristics to collect power during regenerative braking (switchback, braking, and accelerator-off regeneration) and then reuse it to extend the operating time.



11.5 hours on a single battery charge

[FRSB16-VIII with a 420 Ah/5 hr. battery unit, working in our specified work cycle pattern at an operating rate of 55%]

Auto Power-Off

Auto power-off prevents wasteful power consumption as well as accidents.

The automatic power-off feature automatically cuts power to the truck if no operation is performed for 15 minutes while the key switch is turned on.

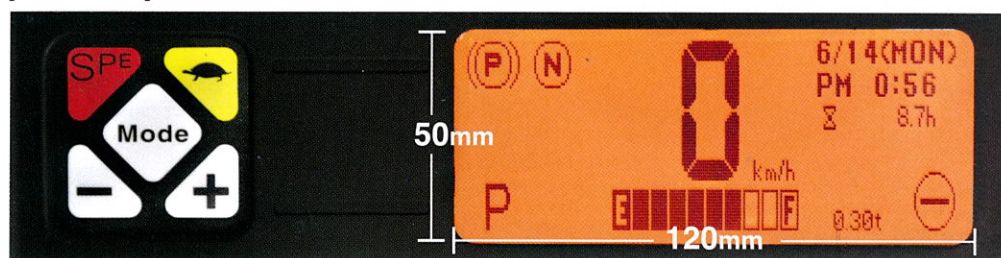
This eliminates wasteful consumption of battery current. The hour meter also stops, to let you know the actual truck operating time, as well as to help set up a proper maintenance schedule.

Power Consumption Rate Indicator^{*1} and Remaining Battery Time Indicator (Large LCD Instrument Panel)

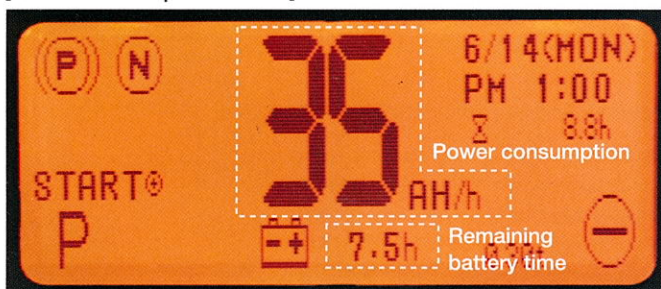
^{*1} Power consumption rate:
Power consumption per hour

A power consumption rate indicator and a remaining battery time indicator allow the operator to plan the work schedule for each truck easily. The power consumption rate is power consumption per hour. The remaining battery time is an estimated length of time that the truck can continue to operate at the present power consumption rate before it needs a recharge.

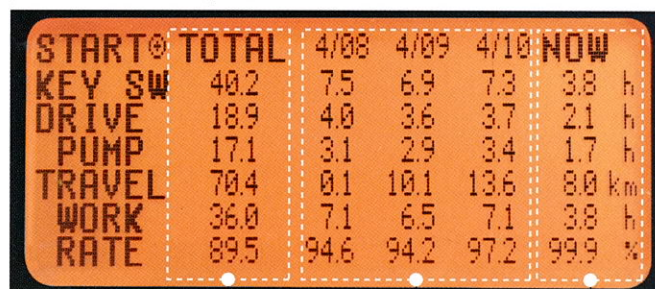
[Main screen]



[Power consumption screen]



[Hour meter screen]



The power consumption value shown on the screen is calculated by using the battery's state of charge. It is not a guarantee of remaining time. Use it as a rough guide.

Total operating time

Data on the past three shifts

Data on the present shift

SAFETY

A variety of features supports better safety.



Password Entry

The password entry system prevents unauthorized persons from operating the truck, further enhancing truck security.

If the truck operation is password-protected, the truck won't start unless the correct password is entered on the LCD screen. The password entry system prevents unauthorized people from operating the truck.



※For details on the password entry system, consult our service personnel.
(The password entry system can be disabled.)

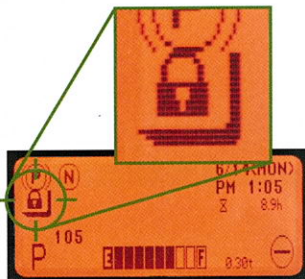
Traveling and Load Handling Interlock System

If the operator leaves his seat during an operation, an alarm buzzer sounds and both the hydraulic and travel controls are disabled automatically.

The traveling and load handling interlock system is a safety device that makes it impossible to operate the lift truck unless the operator is properly seated in the operator's seat. This system helps prevent an accident from happening if the truck operator is not in the proper driving position or a control is moved unintentionally when no one is in the operator's seat.



If the operator does not return to the operator's seat within 3 seconds, both the traveling and load handling systems will be disabled. The load handling interlock warning light on the instrument panel will come on and the alarm buzzer will also sound.



- The brakes are not applied to the truck when the interlock system is actuated. To apply the brakes, step on the brake pedal.
- If the interlock system is activated while the forks are moving up or down, the forks might stop moving abruptly, thus causing the load to fall off the forks. Do not get out of the operator's compartment while the forks are moving up or down.

Foot Switch

The truck can only be driven when the foot switch is pressed

The truck can only be driven when the foot switch is pressed. The operator is required to keep his left foot on the foot switch during operation, meaning that the operator's left leg will always remain in the operator compartment while moving. This feature effectively prevents injury during operation in confined spaces.



Travel and Load Handling System Speed Limiter POINT

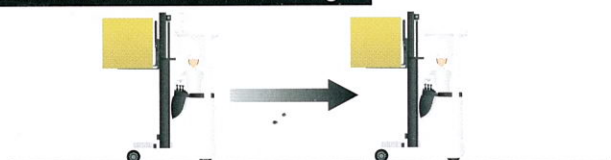
Prevention of spilled loads for added safety

If the forks are raised to the maximum fork height with a load, the truck will automatically detect the fork height and the weight of the load in order to limit the travel, reach, and side-shifting speeds.

Ordinary working conditions



With forks raised to maximum height



Truck detects fork height and load weight

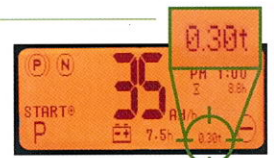
Travel, reach and side-shifting speeds are restricted.

※Remember that this feature is not a tip-over prevention device.

Load Meter POINT

Preventing overloading

With the truck stationary and the hydraulic system not active, the load meter shows the approximate weight of the load on the forks, to help prevent an accident due to overloading.



※The load weight shown on the meter should only be used as a guide.

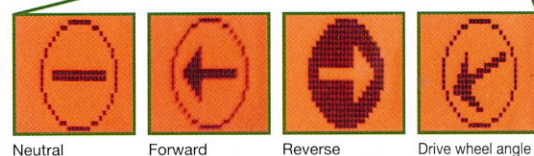
Wheel Angle Indicator

Superb support feature assures added safety

The wheel angle indicator indicates the angle of the drive wheel and the direction in which the drive wheel will rotate. This feature helps even a first-time, sit-on reach truck operator to work safely.



※This icon does not necessarily indicate the direction of travel of the truck.





Steering-Angle Sensitive Travel Speed Limiter

Travel speed is automatically reduced for safety

The truck speed is automatically reduced if the drive wheel angle exceeds a certain value, making it possible for the truck to turn at a safe speed.

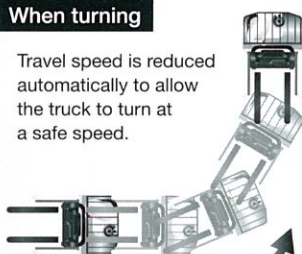
Traveling straight ahead



Maximum travel speed

When turning

Travel speed is reduced automatically to allow the truck to turn at a safe speed.



Speed is reduced

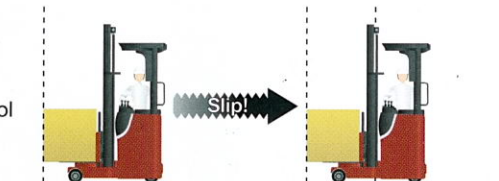
※This feature is not a tip-over prevention device.

Drive Wheel Slip Control

AC control of drive motor assures smooth acceleration

The use of an AC drive motor makes it possible to detect whether the drive wheel is spinning when starting or accelerating. This system immediately eliminates any slippage by fine tuning the drive power. The AC drive motor provides smooth starts and acceleration, even on a slippery surface, without requiring complicated accelerator control operations. AC control of the drive motor also allows finer control of the motor to reduce the shock caused when starting the truck. In addition, regenerative braking is applied when the accelerator control is moved into neutral, providing better energy efficiency.

Without slip control



FRSB-III



Acceleration without slipping

Speed-Sensitive Power Steering

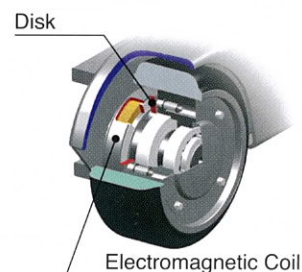
Optimal steering feel attained according to travel speed

The speed-sensitive power steering unit controls the angle of the drive wheel according to the travel speed, to allow easy steering at low speeds while improving the stability of the truck when traveling at high speed.

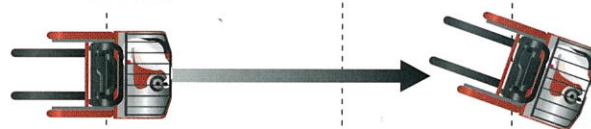
Rear Wheel Braking (option)

Stable braking force is assured

The rear wheels can be optionally equipped with electromagnetic brakes. Then the truck is braked using all three wheels, so that the truck will come to a stop in a short distance without sliding sideways, even on a slippery surface.

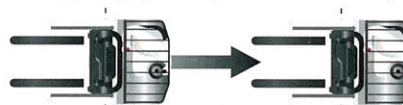


Without rear brakes



When only the drive wheel is braked, the truck skids sideways and takes a long distance to stop

FRSB-III (With optional rear brakes)



Brakes are applied

When all three wheels are braked, the truck comes to a stop in a short distance without sliding sideways.

COMFORT

Spacious operator's compartment is combined with a full complement of features to provide a comfortable work environment, reducing operator fatigue substantially.



Steering Hand Wheel Position and Angle Can be Adjusted

Adjustable steering hand wheel position and angle assures easier steering

The steering hand wheel can be adjusted according to the individual operator's physique, to improve operability and reduce operator fatigue.



■ Fore-and-aft adjustment

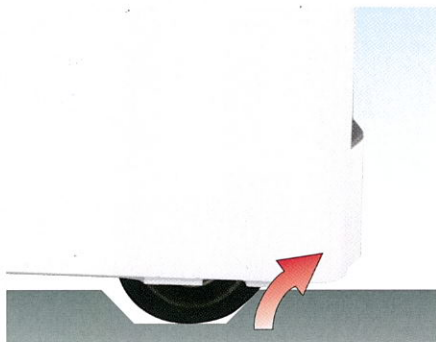


■ Angle adjustment

Automatic Drive Motor Torque Increase

Easy escape from a pothole

The drive motor torque is increased automatically when the truck climbs a slope or needs to get out of a pothole, to allow for smooth movement simply by manipulating the accelerator control in a manner similar to traveling on a flat surface.



Suspension Seat (Grammer-brand)

Comfortable working environment

Grammer suspension seats are one of the world's highest quality seats, which keep the driver comfortable and performing at his peak as well. This highly durable suspension seat is also equipped with a fore-and-aft position adjustment, reclining control, and weight adjustment (45 – 170 kg).



Electromagnetic Brake

Strong braking force assures safe operation

The electromagnetic brake, suitable for holding position and in emergency stop applications, acts as a firm parking brake and as a reliable emergency brake.



Assist Grips

Two assist grips allow for easy mounting and dismounting

The truck has two assist grips to help you get on and off the truck easily and safely.

Combined with the lower floor height, the assist grips offer a more comfortable working environment, thus reducing operator fatigue as well as decreasing the possibility of accidents.

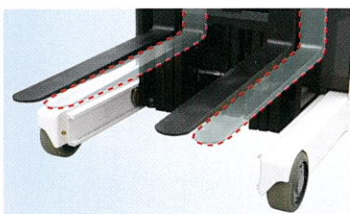




Integral Sideshifter Is Standard Equipment

Sideshifter is standard equipment for better work efficiency

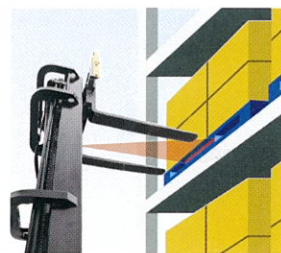
The sideshifter can move the forks and the load backrest to the left or the right, to align them perfectly with pallet openings when picking up a load. It also allows easy and accurate stacking at the specified location without needing to reposition the truck frequently.



Fork Positioning Laser Unit (option)

Easy insertion of forks into pallet

The fork positioning laser unit shines a visible laser beam from the base of the forks toward the rack, to help the operator check the fork height and make it easy to inset the forks into the openings in a pallet. This feature helps reduce the possibility of loads and pallets getting damaged as well as enhancing productivity substantially. It is well suited for stacking and unstacking loads in high locations and for handling loads in a dark area.



Steer-By-Wire System

Light steering operation reduces operator fatigue

Full electric power steering system provides remarkably light, effortless steering.

Replacement of shafts and gears with sensors and harnesses eliminates any mechanical linkage, thus enlarging the floor space substantially.

Fingertip Hydraulic Controls (option)

Easy and efficient load handling operation

Optional fingertip-control of hydraulic levers (for the mast and attachments) improves work efficiency substantially.

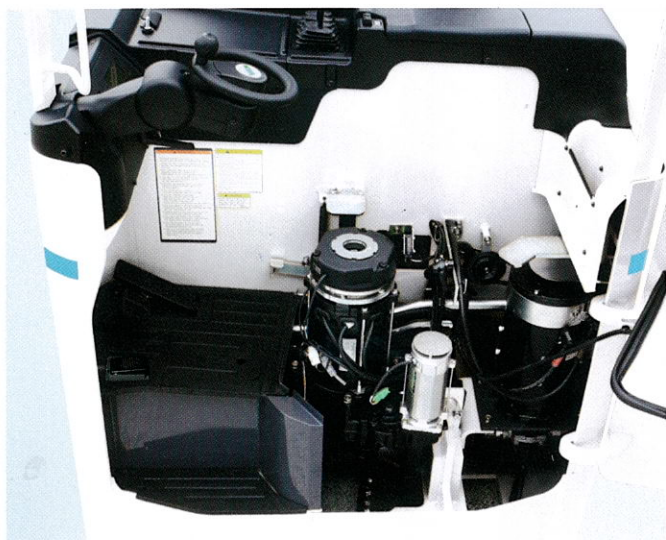


High-Lift Mast (option)

High-lift masts for high stacking applications

High-lift masts with a lifting height of up to 8.5 m are available as an option.

The rated load of the truck remains unchanged as long as the lifting height is less than 6 m (5 m on the FRSB25-VIII).





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- These products and specifications are subject to change without notice.
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