

# FB-IX

ELECTRIC COUNTER-BALANCE FORKLIFT TRUCK



1.0 - 3.5 tons

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Class-1 Sit-down type

# BEYOND THE LIMITS



# FB-IX

1.0 - 3.5 tons

ELECTRIC COUNTER-BALANCE FORKLIFT TRUCK  
[Class-1 Sit-down type]

FB-IX with its rigid and water resistant body, provides optimum performance in all material handling scenarios. It fulfills a wide range of specific job requirements while meeting the important criteria of environmental cleanliness and energy conservation.

This next-generation battery-powered forklift truck is certainly the solution to operators and other workers. It brings greater work efficiency and productivity to any logistics operations.

2ton  
Class



1ton  
Class



3ton  
Class



| Model                          | Standard Wheelbase Truck |        |        |        |        |        |         | Long Wheelbase Truck |          |
|--------------------------------|--------------------------|--------|--------|--------|--------|--------|---------|----------------------|----------|
|                                | FB10-9                   | FB15-9 | FB18-9 | FB20-9 | FB25-9 | FB30-9 | FB35-9S | FB20-9LB             | FB25-9LB |
| Load Capacity (Rated Capacity) | 1000kg                   | 1500kg | 1750kg | 2000kg | 2500kg | 3000kg | 3500kg  | 2000kg               | 2500kg   |

# Reliability and Durability

Redesigned from the ground up to deliver maximum performance, the FB-IX has a completely new frame with excellent reliability and rigidity, ready to withstand the toughest work conditions.

## Water Resistance

The truck body has an IPX4 rating, which means it resists water splashing from any direction. This makes it possible to work outdoors without worrying about falling rain or splashing water.

International Protection Standard  
**IPX4** Class



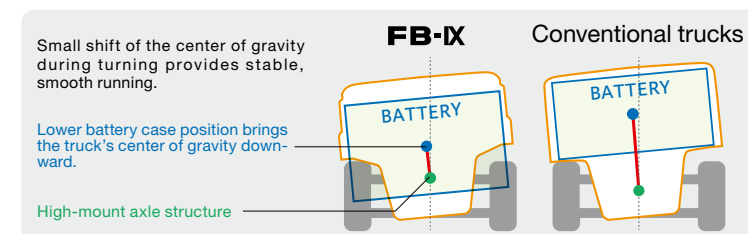
## Reinforced Super-rigid Frame

The truck has integrated side and main frames. The rear frame is protected by a cast steel bumper. This robust, durable design makes the truck resistant to the hard shocks that can occur during busy work.



## Improved Stability during Traveling and Turning

The frame has a low center of gravity, thanks to the lowered battery case position and high-mount axle structure. This design minimizes shifting of the center of gravity while running and turning, for smooth and stable handling.



# Eco-Friendly

The FB-IX meets the demands of the times with economical and environment-friendly operation.



## ECO Mode

Putting the truck in the ECO Mode's ecology and economy operation helps reduce power consumption.



ECO Mode is easily selected with the flick of a switch on the indicator panel.

N + ECO Mode  
Battery runtime per charge  
**11 hours 30 minutes**

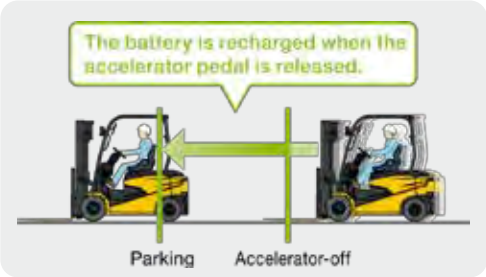
\*1. Measured in a standard FB-IX truck with 1.5-ton capacity (battery capacity: 48 V 415 Ah), operating in the F30:2000 work cycle pattern (operating rate 55%, discharge rate 75%) specified by JIVAS (Japan Industrial Vehicles Association).  
\*2. The above battery runtime should be considered as an estimated figure. Runtime may vary according to the work conditions and use environment.



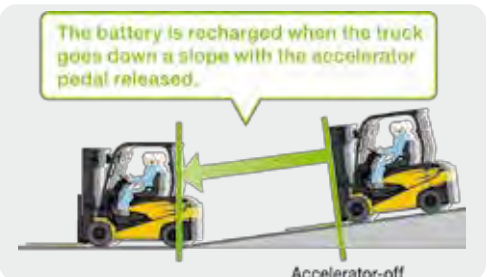
## The Regeneration System

Electric energy is efficiently recovered by the following five different regeneration. These are standard package.

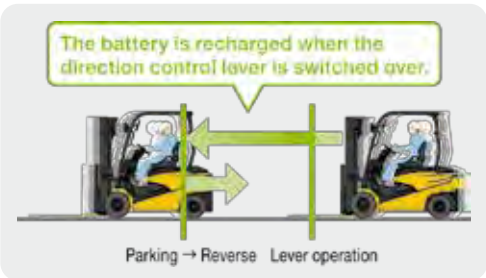
### 01 Accelerator-off



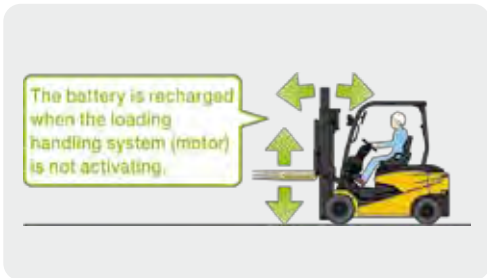
### 04 Slowing down on downhill



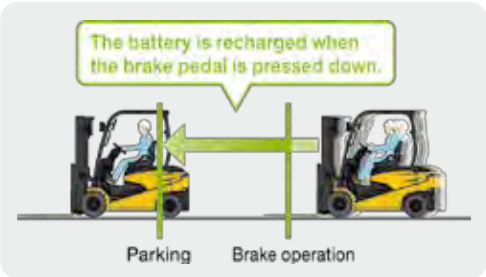
### 02 Switch-backs



### 05 Lift/tilt operations



### 03 Braking



## Auto Power-off

The auto power-off is a feature automatically cuts power to the truck after it has been out-of-use for approximately 15 minutes. This prevents waste of power consumption and deals with forgetting to turn off the key switch.

15 min.  
OFF



# Productivity

Smooth operating feel and better operability boost productivity.

## Adjustable Operating Characteristics

The operator can select the most suitable operating mode, for traveling or load handling, to suit his/her driving skills and the working conditions. The custom mode allows even finer tuning of the operating characteristics.

Three operating modes are available for different work conditions.



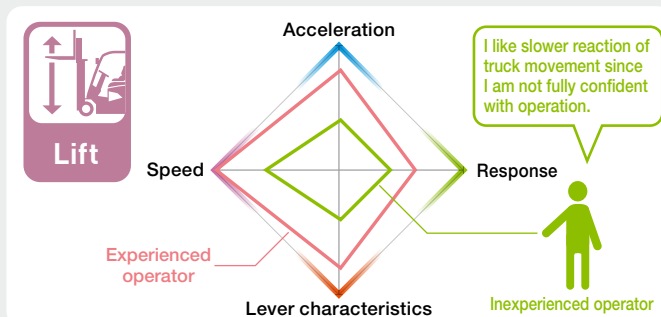
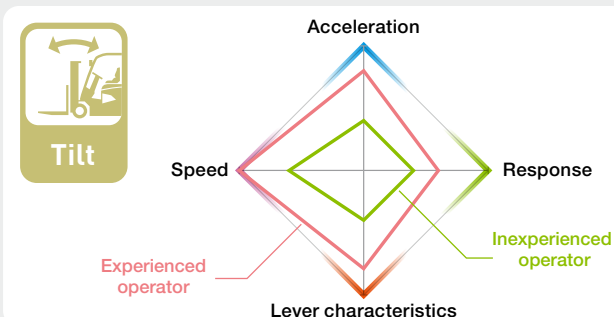
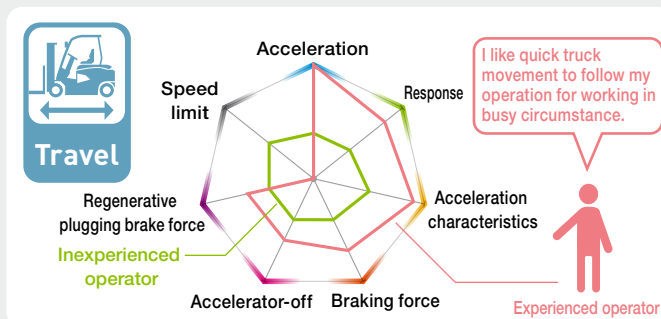
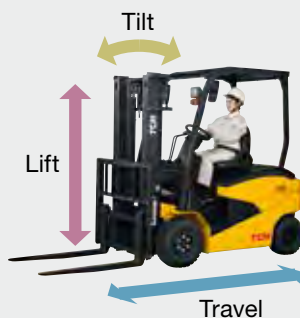
\*When taking delivery of a new lift truck, carefully consider the difference between the P (Power) Mode and N (Normal) Mode before setting the default operation mode.

- P Power Mode**  
Used for operations that require a lot of power and high torque.
- N Normal Mode**  
Used for standard operations.
- C Custom Mode**  
Used for customizing both traveling and load handling characteristics.

## Customizing the Operating Characteristics

Within the Custom Mode, Administrator Mode can be selected to adjust the operating parameter more precisely. The driving or load handling characteristics can be finely tuned according to the operator's skills and the working conditions. The truck is designed with flexibility to respond to both agile operation by experienced operators and the slower operation by inexperienced operators.

The operating feel for traveling, lifting and tilling can be finely tuned by adjusting parameters and can be registered 10 levels selectable for each type of operation.

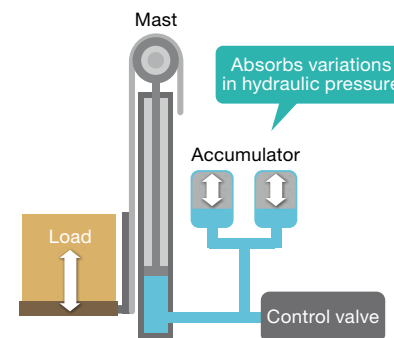
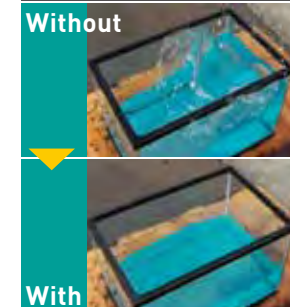


\*The parameters in the illustrations should be regarded as estimated figures.

## Smooth Run System Option

This system has two accumulators that absorb vibrations in lift cylinder pressure when getting over bumps on the road or floor surface. This reduces vibrations and shocks during all stages of load handling, from no load to full load.

### Superb vibration and shock reduction



- Reducing damage to loads**  
The Smooth Run System reduces or alleviates vibrations and shocks to loads on the forks from the road surface during traveling. This system is ideally suited for handling precision devices and glass products.
- Reducing noise**  
The two accumulators reduce the operating noise from forks that occurs when getting over bumps on the road or floor surface. Noise reduction is needed for load handling in residential areas or at night.
- Reducing fatigue and improving operator comfort**  
Reduced shocks during traveling will help reduce operator fatigue and improve safety in operation.

## LED Lights Option

Optional LED lights are available for safe traveling and load handling operations.

### LED Lights

LED lights are bright and energy-saving and have a long life. LED headlights, rear combination lights or a beacon light are available as options. They will help improve worksite safety during load handling operation.



\*A single-light type is also available.

### Blue Rear Warning Light

The blue rear warning light illuminates the floor surface behind the truck with blue light while it is traveling in reverse, to let other workers around the truck know the direction of travel of the truck or that the approach of truck. The visibility of the truck will be improved in worksites where visibility is restricted or the noise level is high.



### Rear LED Line

A line of LED is installed between the rear cover and the counter-weight. Workers or trucks behind you can see the truck clearly, even in the dark worksite.



### LED Flashlight

An LED flashlight is optionally available. It blinks at the rear part of the truck to let workers who are behind the truck know the location of the moving truck.



### LED Spotlight

An optional LED spotlight can be installed on the upper right corner of the overhead guard. Its bright light will help the operator to read documents at a dark worksite.



## Battery Exchange Options Option

Two battery exchange options are available. With the fork pocket under battery system, another fork-lift is used to exchange the battery. In the battery slide roller system, a roller bed is used to pull the battery case.

Fork pocket under battery system



Performance

The FB-IX series are equipped with a central management system using AC motors, enabling a substantial improvement of work efficiency.



Central Management System

The central management system is mounted on all FB-IX Series to provide excellent operability and high safety in almost every type of work situations. Our superb management system ensures safe, efficient and comfortable load handling operations.

Driving & Load Handling Control

Improvement of productivity by optimum driving and load handling operations and reduction of environmental impact are both achieved.

- Adjustable Operating Characteristics
- Customization of Operating Characteristics
- ECO Mode (Long operating hours)

Safety Control

The safety functions protect employees as well as the loads.

- Sensing Control System (Travel, lift and tilt\*)
- Pitching Control System
- Operation Interlock System (OIS)



Driving Control

The advanced driving control technology supports safe driving.

- Safety Cruise Function
- Maximum Travel Speed Setting (switching to "Turtle" speed and limiting maximum speed)
- Automatic Torque Increase

Recharge & Charging Control

Longer battery runtime and improved serviceability reduce the burden on the service department.

- Battery Recharge System (using various regeneration functions)
- Multifunctional Battery Charge Mode
- Automatic Battery Fluid Filler\*

\*Tilt control is available as an option.

\*Option

Safety Cruise Function

After the truck comes to a temporary stop while going up or down a ramp, releasing the accelerator and brake pedals will start the truck moving in reverse at ultra-low speed. This allows movement to be resumed easily and safely. In addition, releasing the accelerator pedal while going down a ramp will prevent acceleration, keeping the speed constant for safe travel to the bottom of the ramp.

Accelerator-off Regeneration

When the accelerator pedal is released while going down a ramp, the travel speed is maintained and the energy is reverted to the battery.

Anti-rollback Function

The truck will drive back at about 1 km/h if the accelerator and brake pedals are released on an uphill ramp.



\*It is preferable to use the service brake as well for safety sake.  
\*The truck with loads should be traveled in reverse when going down a ramp.

Automatic Torque Increase

When starting up a ramp or moving with a heavy load on the forks, the automatic torque increase function automatically detects the weight of loads on the forks and increases the output of the traction motor appropriately, allowing easier starts, especially when going up a ramp.

Operation Interlock System (OIS)

If the operator is not on the seat or leaves the operator's compartment, the Operation Interlock System (OIS) is activated to lock the travel and load handling operations of the truck. This safety system prevents an accident from happening if the operator of the truck is not in the correct driving position or a control is moved unintentionally when the operator is not in the seat.



\*This system does not engage the brakes of the truck. Engage the parking brake before leaving the truck.



Maximum Travel Speed Function (Switching to "Turtle" speed and limiting maximum speed)

Switching to "Turtle" speed: Sets the maximum travel speed to the value specified by the operator.

Limiting maximum speed: Controls travel speed so the truck does not exceed the upper limit preset in the Administrator Mode.



\*When "Turtle" speed is selected, the slowest speed is prioritized.

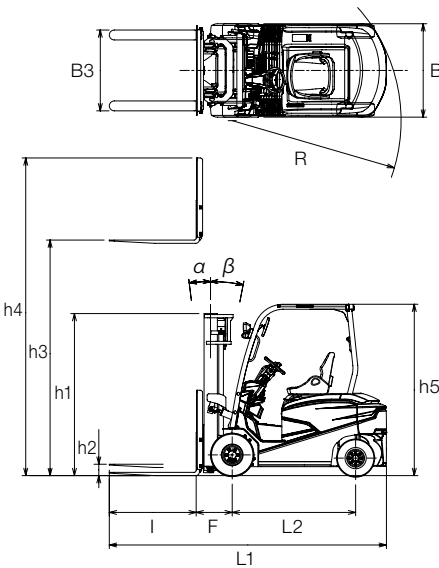
STANDARD SPECIFICATIONS

| Type                        |                                          | Unit                      | Symbol                     | Standard Wheelbase Truck     |                                  |         |             |         |              |              | Long Wheelbase Truck |             |             |  |
|-----------------------------|------------------------------------------|---------------------------|----------------------------|------------------------------|----------------------------------|---------|-------------|---------|--------------|--------------|----------------------|-------------|-------------|--|
| Model                       |                                          |                           |                            | FB10-9                       | FB15-9                           | FB18-9  | FB20-9      | FB25-9  | FB30-9       | FB35-9S      | FB20-9LB             | FB25-9LB    |             |  |
| Truck Performance           | Load Capacity (Rated Capacity)           |                           | kg                         |                              | 1000                             | 1500    | 1750        | 2000    | 2500         | 3000         | 3500                 | 2000        | 2500        |  |
|                             | Load Center                              |                           | mm                         |                              | 500                              |         |             |         |              |              |                      |             |             |  |
|                             | Maximum Fork Height (with Standard Mast) |                           | mm                         | h3                           | 3000                             |         |             |         |              |              |                      |             |             |  |
|                             | Tilt Angle (Fwd/Bwd)                     |                           | degree                     | $\alpha/\beta$               | 7/11                             |         |             |         |              |              |                      |             |             |  |
|                             | Lift Speeds (w. Load/w.o. Load)          |                           | mm/s                       |                              | 390/540                          | 350/540 | 330/540     | 290/470 | 260/470      | 320/550      | 270/460              | 290/470     | 260/470     |  |
|                             | Free Lift                                |                           | mm                         | h2                           | 115                              |         |             |         | 140          |              |                      | 145         | 140         |  |
|                             | Travel Speeds (w. Load/w.o. Load)        |                           | km/h                       |                              | 14.0/16.0                        |         | 13.5/15.5   |         | 14.0/16.0    |              | 13.5/15.5            |             | 14.0/16.0   |  |
| Turning Radius              |                                          | mm                        | R                          | 1850                         |                                  | 1880    |             | 2030    | 2080         | 2260         | 2330                 | 2215        |             |  |
| Truck Dimensions and Weight | Length to Fork Face                      |                           | mm                         | L1                           | 2080                             |         | 2120        |         | 2305         | 2345         | 2505                 | 2600        | 2465        |  |
|                             | Overall Width                            |                           | mm                         | B                            | 1100                             |         | 1115        |         | 1155         |              | 1255                 |             | 1155        |  |
|                             | Overhead Guard Height                    |                           | mm                         | h5                           | 2110                             |         |             |         |              |              | 2200                 |             | 2110        |  |
|                             | Mast Height, Forks Lowered               |                           | mm                         | h1                           | 1990                             |         |             |         | 1995         |              | 2015                 | 2115        | 1995        |  |
|                             | Overall Height, Forks Raised             |                           | mm                         | h4                           | 4055                             |         |             |         |              |              |                      |             |             |  |
|                             | Fork Size                                |                           | mm                         | Length L                     | 35×100×1070                      |         |             |         | 40×122×1070  |              | 45×122×1070          | 50×122×1070 | 40×122×1070 |  |
|                             | Front Overhang                           |                           | mm                         | F                            | 395                              |         |             |         | 445          |              | 485                  | 490         | 445         |  |
|                             | Wheelbase                                |                           | mm                         | L2                           | 1410                             |         |             |         | 1520         |              | 1680                 |             |             |  |
|                             | Fork Spread                              |                           | mm                         | Max. B3                      | 240-920                          |         |             |         | 260-995      |              | 280-995              |             | 260-995     |  |
|                             | Tread (Front/Rear)                       |                           | mm                         |                              | 930/900                          |         | 925/900     |         | 955/965      |              | 1030/980             |             | 955/965     |  |
|                             | Ground Clearance                         |                           | At the Center of Wheelbase | mm                           |                                  | 110     |             |         |              |              | 120                  |             | 110         |  |
|                             | Truck Weight (w.o. Battery)              |                           | kg                         |                              | 2060                             | 2190    | 2420        | 2895    | 3270         | 3790         | 4340                 | 2965        |             |  |
| Others                      | Battery                                  | Voltage                   | V                          | 48                           |                                  |         |             |         | 72           |              | 48                   |             |             |  |
|                             |                                          | Capacity (5-hour Rating)* | Ah/5HR                     | 370                          | 415                              |         | 510         | 565     | 470          |              | 725                  |             |             |  |
|                             | Electric Motors                          | Drive Motor               | kW                         | 7                            |                                  |         |             | 8.5     |              | 11.0         |                      | 8.5         |             |  |
|                             |                                          | Hydraulic Motor           | kW                         | 9.5                          |                                  |         |             | 11.5    |              | 15.0         |                      | 11.5        |             |  |
|                             |                                          | Power Steering            | kW                         | 1.5                          |                                  |         |             |         |              | 1.7          |                      | 1.5         |             |  |
|                             | Battery Charger                          | Charging Method           |                            | Automatic Stationary Charger |                                  |         |             |         |              |              |                      |             |             |  |
|                             |                                          | Capacity                  | kVA                        | 6.5                          |                                  |         |             | 8.1     |              | 12.0         |                      | 10.7        |             |  |
|                             | Power Steering                           |                           |                            |                              | Electro-hydraulic Power Steering |         |             |         |              |              |                      |             |             |  |
|                             | Travel/Load Handling Control             |                           |                            |                              | AC Inverter Control              |         |             |         |              |              |                      |             |             |  |
|                             | Front Wheel                              |                           |                            |                              | 6.00-9 10PR                      |         | 21x8-9 14PR |         | 21x8-9 16PR  |              | 28x9-15 14PR         |             | 21x8-9 16PR |  |
| Rear Wheel                  |                                          |                           |                            | 5.00-8 8PR                   |                                  |         | 18x7-8 14PR |         | 6.50-10 10PR | 6.50-10 12PR | 18x7-8 14PR          |             |             |  |

\* This is the capacity of the factory installed battery with minimum capacity.

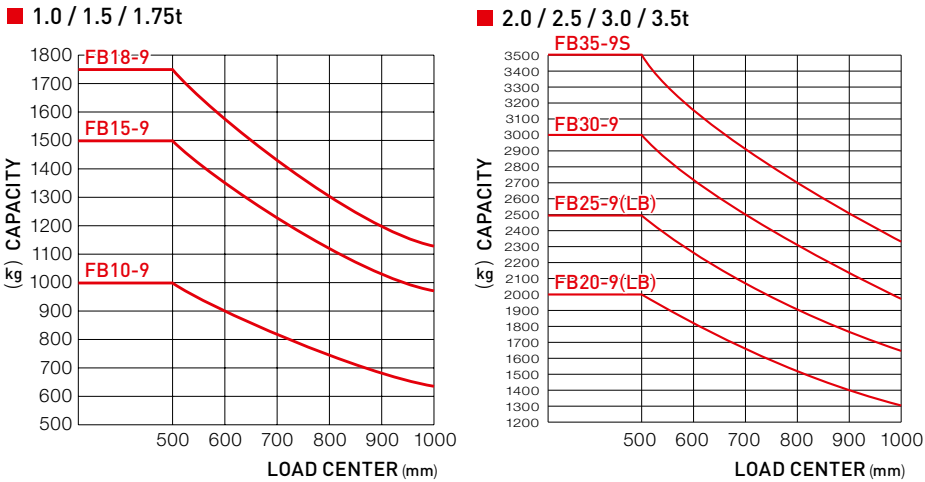
Specifications are subject to change without notice.

DIMENSIONS



LOAD CHART

(Truck with a 2-stage Wide-view Mast with Lift Height of 3.0 m)



# FB-IX

ELECTRIC COUNTER-BALANCE FORKLIFT TRUCK [Class-1 Sit-down type]



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**Note:**

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Photos and illustrations may slightly differ from the actual trucks.  
Photos and illustrations may or may not include optional equipment and accessories.  
Features and specifications may vary depending on markets.  
Performance data and dimensions are nominal and subject to tolerances.  
Produced in ISO certified factory.

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