

NICHYU



ELECTRIC LIFT TRUCK
THREE-WHEELER
FBT 13/15/18/20



Eco-Friendly Design

The FBT Series Offers Four Clear Advantages Enhanced by AC Control.

Clean, eco-friendly design

Nichiyu's clean electric forklifts discharge no dust-producing exhaust. They are the perfect choice for transporting foodstuffs and for indoor operations, as they do not contaminate cargoes with soot or odors. What's more, electric forklifts can be operated safely indoors and in full confidence. In addition, because electric forklifts do not contribute to air pollution, they reduce the burden on the environment.

Low-noise operation

All motors in the FBT Series exhibit exceptionally quiet operation during traveling and material-handling operation. For example, the power steering function operates only on demand. This approach is ideal for the transportation of precision machinery, as it minimizes vibration and allows for fine movement.

Easy operation

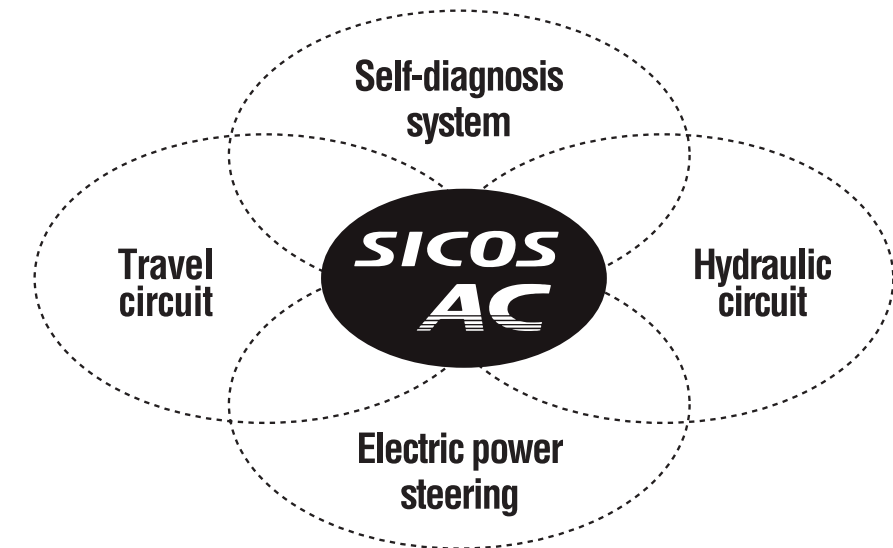
The simple design of the FBT Series forklifts makes them easy to drive and facilitates material handling. The three-wheeled configuration ensures easy operation in confined spaces inaccessible to conventional counterbalanced forklifts. In short, the FBT Series smoothly integrates the advantages of a powerful counterbalanced truck in a compact reach truck.

Energy efficiency

FBT Series forklifts provide continual and optimal control of every aspect of travel, hydraulics, and power steering. What's more, they offer an Auto Power-Off function that automatically switches off the power source to minimize power consumption and ensure maximum performance.

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ELECTRIC LIFT TRUCK THREE-WHEELER with SICOS-AC



The Multifunctional Centralized Control System for AC Control

SICOS-AC represents the ongoing evolution of the groundbreaking SICOS control system. It features a new type of controller tuned for full compatibility with AC systems and exhibits more powerful and more advanced capabilities. By integrating the travel, hydraulic, and electric power steering functions, the system's advanced intelligence optimizes the operator's interaction with the forklift.



**Optional equipment shown*

**The actual products may differ slightly from the pictures shown.*

High Performance

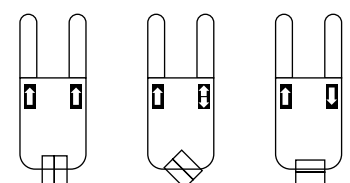
Introducing a new generation of tough, high-torque motors for superior drivability

Remarkably small turning radius

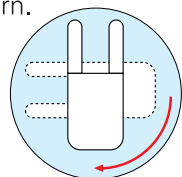
Designed for tight turns in narrow aisles.
With a wide stance for improved stability.

Synchronized tire rotation system

Tight turn technology for confined spaces
FBT Series forklifts feature front wheels that are each driven by their own independent motors. Once the rear wheels exceed a predetermined steering angle, the appropriate front wheel will automatically and independently reverse rotation to ensure a smoother small-radius turn.



Each front wheel is independently controlled.



- Minimum turning radius: 1500 mm (FBT 15)
- Practical right angle stacking aisle width: 3260 mm (Model FBT15 with 1100 × 1100 mm pallet. Includes 200 mm clearance.)

Dual rear wheels

Wide-footprint dual rear wheels are standard on all FBT Series forklifts. This design ensures excellent stability during turns and extended-height lifting.



● Rear wheels tread: 250 mm (FBT15)

Braking

When the brakes are applied in the usual manner, braking energy is recovered. Besides making the brakes more sensitive, this feature extends brake life by reducing wear of the pads.

Speed suppression on downslopes

This regenerative function recovers energy by maintaining a constant speed while the vehicle descends a slope after the accelerator has been released. The FBT Series also features a “creep” function that helps to initiate forward movement after a full stop on a slope.

Energy-efficient design

Energy-efficiency complemented by an array of regenerative functions that minimize power consumption and improve productivity.

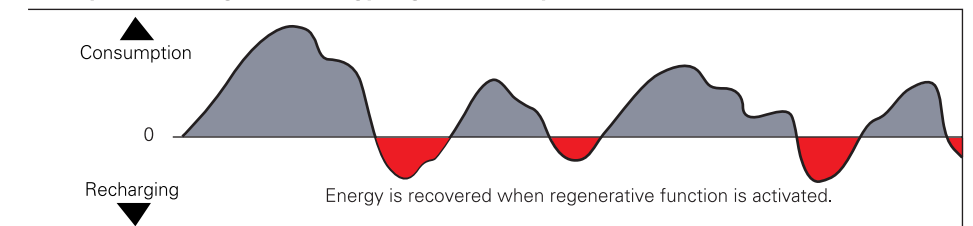
Coasting

Activated when the accelerator is released during travel, this function recreates the sensation of natural deceleration while recovering the braking energy.

Plugging

The battery efficiently recovers the energy produced when the direction of travel is reversed.

Conceptual Drawing of the Energy Regeneration System



Automatic power-off

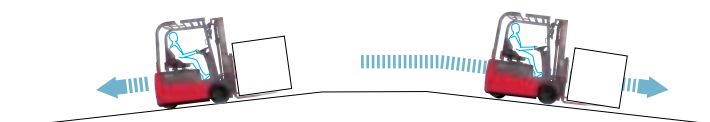
To prevent wasteful power consumption, the power is automatically shut off when the forklift is left idle for 15 minutes.

Dependable operation under difficult conditions

Safe operation is assured when working outdoors in sudden rain or on slopes. It's the electric lift truck that's not hindered by troublesome restrictions.

Nichiyu's "safety cruise" limits speed on downslopes.

Even if the accelerator or brake is released while an FBT Series forklift is on an upslope, the truck will not roll backward at a speed above 1 km/h. And if the accelerator is released while the truck is descending a slope, the truck maintains its initial speed. At the same time, the advanced regenerative function recaptures energy for the battery. You'll also appreciate the powerful AC driving motor when climbing slopes under load.

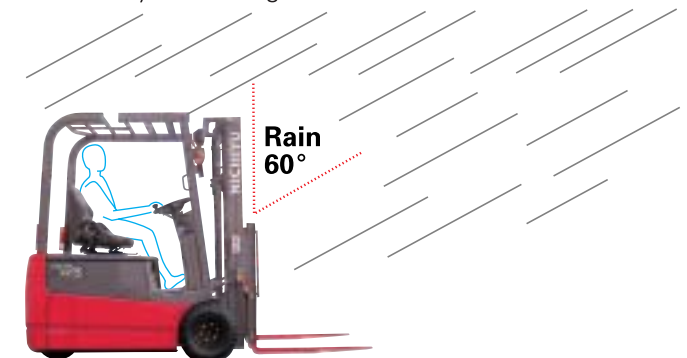


● Climbing
When the accelerator or brake is released, the vehicle will not roll at a speed above 1 km/h (runaway prevention).

● Descending
When descending a slope, the regenerative function helps to maintain a constant safe speed (regenerative speed suppression).

IPX3 rating

With its waterproof IPX3* rating, the FBT Series can now operate even in moderately windblown rain (falling at an angle of up to 60 degrees). As a pioneer in the industry, Nichiyu has clearly overcome a longstanding disadvantage of conventional electric forklifts by continuing to innovate.



* Grade 3 of the "electromechanical device grade test for waterproofing and resistance to penetration by solid objects" as prescribed by the Japanese Industrial Standards.



Functional Design

With multi-display for at-a-glance viewing of machine status

Easy-to-read display

Operating status and machine conditions are now visible at a glance thanks to the vacuum fluorescent display (VFD) located in the center of the operator's compartment. The screen displays a multitude of real-time information provided by the SICOS-AC system-including traveling speed, battery status, current time and operating hours. The use of both text and icons makes the information even easier to scan and understand.

Multiple driving modes

Eight driving modes and three acceleration modes-all freely selectable-effectively accommodate operating conditions and operator experience levels. These settings range from a smooth, energy-saving economy mode to a power mode that quickly provides ample power. The operator can simply choose the best mode for the circumstances.

Self-Diagnosis function

Nichiyu's forklifts are equipped with our proprietary self-diagnosis function that quickly determines the causes of any faults or problems that may arise. An icon or message is displayed on the monitor, immediately notifying the operator of the location of the problem. And to simplify maintenance, the diagnosis is logged in the memory of the SICOS-AC system.



For comfortable operation

Electric power steering (EPS)

Smooth control with a light touch

Our EPS is much smoother and more responsive than conventional hydraulic power steering. The steering knob is fixed at the rear wheel position for positive steering control and greatly reduced operator fatigue. What's more, the structure has been simplified because it eliminates the hydraulic piping typical of conventional systems. The advantages are no oil leaks, no disrupting motor sound, and exceptionally low power consumption. Our EPS highlight the advantages of the electric forklift.

Operator restraint system seat

This seat incorporates ergonomic principles to reduce operator fatigue.

We've applied ergonomic principles in this seat in order to facilitate rearward viewing while minimizing operator fatigue. It provides a feeling of freedom yet includes a seatbelt with an emergency locking retractor (ELR) that is triggered in an emergency. The seatback includes a drip-proof case for the operation manual.



Hydraulic fingertip lever (optional)

Comfortable hydraulic operation

Lifting, tilting and other hydraulic operations can now be controlled with one finger thanks to our optional fingertip lever feature. Nichiyu's proprietary control circuitry allows the operator to exert fine control at just the touch of a finger. This approach demonstrates its value in precise operations such as the transport of precision machinery. What's more, the armrest-mounted controls greatly reduce operator fatigue.

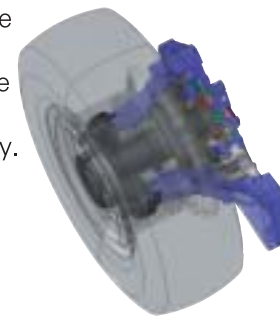


Safety features as proof of high quality

Wet Disk Brake

New braking system for increased safety

The wet disk brake provides more powerful and stable braking force without affection by the working environment such as dust and water. The maintenance is easier and efficient because it needs oil replacement only.



Operation Interlock System (OIS)

To secure safe and properly operation

If the operator is not seated correctly for more than two seconds, operation of traveling and hydraulic are interlocked.



Neutral safety feature

Preventing accidents caused by misoperation

The Neutral Safety Feature prevents the forklift from moving suddenly if the keyswitch is turned on while the accelerator is depressed or during operation of the hydraulic lever. For preventing accidents caused by misoperation, it issues a warning display and buzzer.

Load indicator (optional)

The multi-display instantly shows the weight of the load.

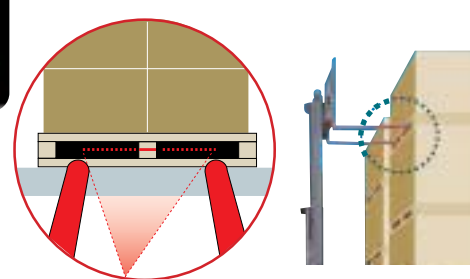
This convenient function makes it easy to prevent overloading and underloading. Tare weight settings allow for deduction of the weight of packaging and pallets.



Laser pointer (optional)

The Laser Beam Positioner easily indicates fork position.

By indicating the fork insertion position on the pallet, the laser beam feature allows for easy fork positioning. Besides reducing operator fatigue, this innovation helps to prevent damage to pallets and cargoes. A Nichiyu exclusive, the Laser Beam Positioner shows its value at high locations and in dark work areas.



Other features

● : Standard ○ : Option

Driving speed limit	●
Lift limit	○
Hour meter	●
Fork soft landing feature	●
Impact absorbing mast	●
Headlight	●
Revolving light	○
Turn signal lamps	●
Rear combination lamps	○
Back-up alarm	●
Rearview mirror	○
Floor mat	○
Valve lever boot	●



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 Nichiyu's terms and conditions. Specifications are subject to change without notice in the interests of product improvement.

NICHYU

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