

# FB Series

Pneumatic Tire / Electric-powered Models



Beyond the limits!

# FB Series

Pneumatic Tire / Electric-powered Models  
1.0-3.5 tons



Pursuing the top quality in the field of electric-powered forklift trucks, FB Series features enhanced environmental friendliness and increased economy. They meet the needs of the times, and provide better operator comfort and controllability. This is attained by ergonomically designed controls and seating, and many safety devices which help to protect the operator from a variety of potential hazards.



## Enhanced environmental friendliness and increased economy

Saving the planet and keeping worksites clean!

Nowadays, environmental friendly products are requested everywhere in the world. FB Series, the counterbalanced electric-powered forklift trucks manufactured by UniCarriers, promises to be the ecology-minded contender in the material handling scenes. Lower power consumption and longer spans between the battery charges improve productivity, also protect our environments. FB Series is the product designed as the result of the requests given by the planet and the industry.

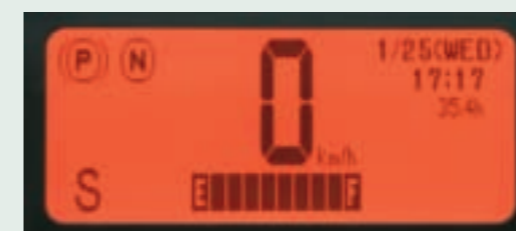


### Fully-hydraulic Orbitrol power steering(standard)

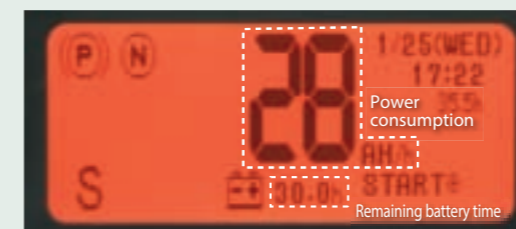
The power steering system uses Orbitrol, a fully-hydraulic power steering system that features low maintenance costs.

### The easy-to-read LCD panel includes a power consumption rate and a remaining battery time screen

The multi-function LCD panel shows power consumption per hour and remaining battery time. You can easily check the truck's power consumption at a glance for better energy savings.



Easy-to-read multi-function LCD panel



The LCD panel allows the operator to check present power consumption. The indicator shows power consumption per hour. "Remaining battery time" is the length of time the truck can keep operating before it needs a recharge.  
※The "remaining battery time" readout is not necessarily perfectly accurate, because it is calculated using the reading of the battery charge indicator. It should be used as a rough guide.

Hour meter

START	TOTAL	400	405	410	NOW
KEY SW	482	75	69	73	38
DRIVE	189	40	36	37	21
PUMP	171	31	29	34	17
TRAVEL	784	181	181	126	88
WORK	368	71	65	71	38
RATE	895	448	942	972	999

Total operating time

Data on the past three shifts

Data on the present shift

### Longer battery runtimes per charge (For trucks with optional EPS)

The long (8.5 hour) battery runtime on a single charge has been achieved by using a highly-efficient AC drive motor that draws less current, and various types of regenerative braking: switch-back, accelerator-off and braking regeneration.

(The values were measured on an FB15 with optional EPS working in our specified work cycle pattern at an operating rate of 55% in the P operating mode.)

※The explanation above applies to trucks with an optional EPS unit. Trucks with standard Orbitrol power steering will have a 15 to 20% shorter battery run time.

### Auto power-off

The power supply is turned off automatically if the operator's seat is left vacant or no operation is performed over a set period of time. This helps eliminate wasteful consumption of battery current as well as prevent accidents when the operator gets back on the truck.



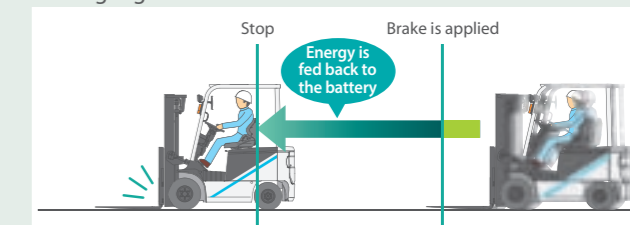
### A new type of AC motor

AC motors are used for both the drive and the lift systems, to attain better controllability and low maintenance.

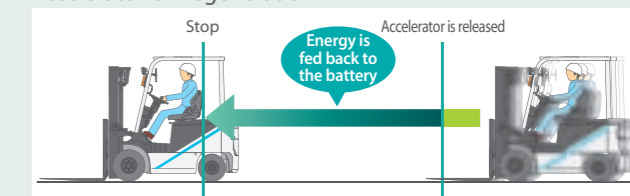
### Regeneration means energy savings

Efficient recovery of braking energy is attained by three types of regeneration - braking, accelerator-off, and switchback. The substantially reduced switchback time and distance will reduce operator fatigue.

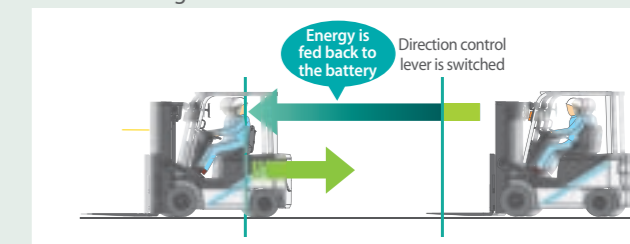
Braking regeneration



Accelerator-off regeneration



Switchback regeneration



### Three power output modes available

You can select any of three power output modes, "S", "P" and "E", to match your specific driving or load handling job requirements. This feature helps improve economy and productivity.

	Travel speed (unloaded)	Battery time on a single battery charge:
Economy-mode	14.0 km/h	9.0 hours
Power-mode	15.0 km/h	8.5 hours
Super-mode	16.0 km/h	8.0 hours

(The values were measured on an FB15 with optional EPS working in our specified work cycle pattern at an operating rate of 55% in the P operating mode.)



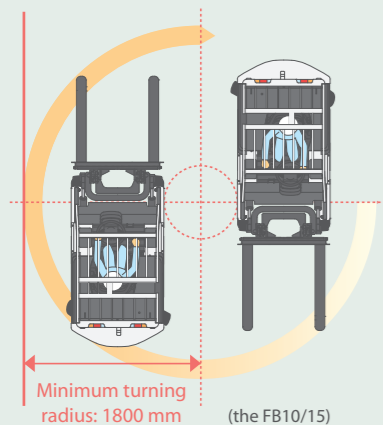
## ○ Better operator comfort and controllability

### Ergonomics for people working on-site

With an ergonomically designed operator's compartment and compact body, FB Series offer better operator comfort and enhanced controllability. Assuming that operators need to get on and off the truck frequently in the material handling operation, a variety of ideas, including a low floor step heights and wide steps to reduce operator fatigue and motion have been incorporated into FB Series, fulfilling the needs derived from the work sites.

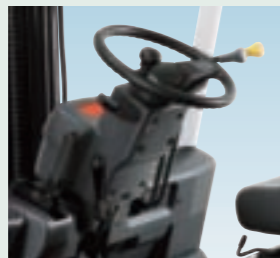
#### The most compact truck body in its class

The compact body, with a minimum turning radius as short as 1800mm, delivers high work efficiency in the narrow aisles.



#### Tilting steering column

The steering wheel angle can be adjusted to the operator's preference, which means more efficient steering with less fatigue.



#### The safety seat

The safety seat with side supports protects the operator better. The seat also has an angle-adjustable reclining back to suit the operator's physique, thus helping reduce operator fatigue.



#### An integrated turn signal and lighting switch lever

The turn signal lever and lighting switch are integrated into one unit. It returns automatically to neutral when the steering wheel goes back to the straight-ahead position. Rear combination lights are located on the overhead guard for better visibility from behind in the workplace.



#### Simplified battery replacement system (optional)

If a truck needs to be operated for an extended period of time, a simplified battery replacement system will be optionally available for easy replacement with a spare battery.

※ For battery replacement, it is necessary to have another forklift with long forks of more than 1220 mm.

#### Easy on-and-off

The low floor height and step heights and the wide steps make it easy for the operator to get on and get off the truck, reducing operator motion and fatigue while improving the safety.



(The FB10/15)

#### Bigger floor space

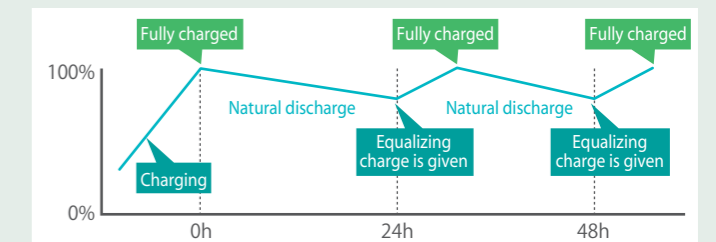
The generous floor space makes getting in and out anxiety-free as well as providing more knee room to reduce operator fatigue.



#### Super equalizing charge

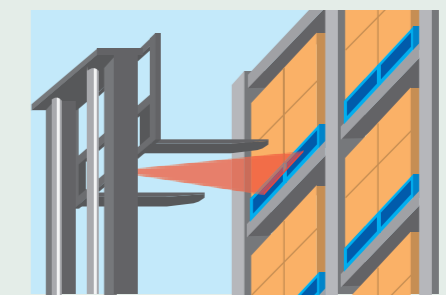
If the battery charger is set to the "super equalizing charge" mode, an equalizing charge will be applied to the battery every 24 hours, at the end of a regular cycle charge.

This means that the battery will be fully charged and you can use it immediately, even after the truck has been out of service for a long period of time.



#### Fork positioning laser unit (optional)

The fork-positioning laser unit helps the operator check the fork height and makes it safe and easy to insert the forks into the openings of a pallet. It also helps reduce damage to loads and pallets if the operator fails to determine the fork height correctly. This function is especially useful for stacking or unstacking loads in high locations, and for handling loads in a dark area.



※ The laser beam is only lit when the forks are level.



## Safety

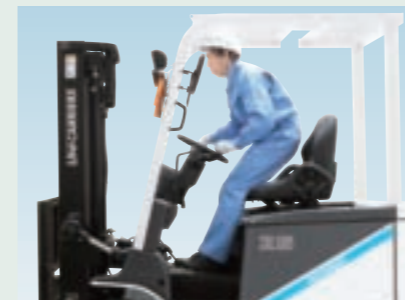
Operator safety is one of the most important themes in FB Series.

In the pursuit of the ultimate in operator safety, FB Series is equipped with many safety devices to protect from a variety of hazards which may occur in the material handling operations. In line with other products designed and made by UniCarriers, consideration to operator's safety is one of the most important themes of our product development.



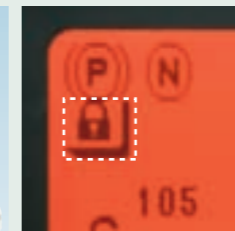
### Travel and load handling interlock(optional)

The travel and load handling interlock system automatically locks all lifting and travelling functions when the operator leaves the seat, preventing an accident from happening if the operator of the truck is not in the correct driving position or a control lever is moved unintentionally when he/she is not in the operator's seat.



Interlock is activated when the operator stands up from the seat

※When the interlock system is actuated, the regular brake is not applied to the truck. Apply the parking brake when leaving the truck.

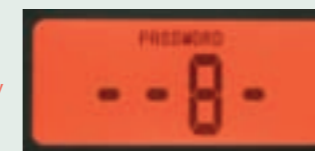


Interlock warning light

### Password entry

The truck won't start unless the correct password is entered into the password entry system. This prevents any unauthorized person from operating the truck.

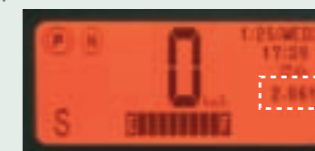
※Consult with our service personnel to learn how to enable the password entry system and set passwords. (Password protection can be disabled.)



### Load meter (optional)

The load meter shows the approximate weight of the load being carried on the forks, to help prevent an accident due to overloading.

※The reading should be used as a guide.

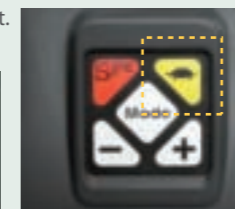


### Speed limiter

The maximum travel speed can be limited according to the working conditions. It can be set freely to a specified speed limit.



Speed limiter in operation



Speed limiter switch

※Consult with our service personnel to learn how to set speed limits.

### Steering-angle sensitive travel speed limiter

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

※Remember that this feature is not intended to be a device that prevents tip-overs.

### Speed-sensitive power steering

The speed-sensitive power steering system provides varying amounts of assistance depending on the driving conditions (more power assist at low speeds and less power assist at high speeds) to give an excellent steering "feel" while improving the stability of the truck at high speeds.

### Wide-view mast

The wide-view mast gives you an excellent view of the fork tips in any position. In addition, the lower dashboard provides the operator with excellent visibility, resulting in safe and quick operation.



### Anti-rollback

The anti-rollback feature prevents the truck from rolling backwards abruptly on a grade if you remove your foot from the brake pedal. This ensures a safe, smooth restart.



Easy Maintenance



The fully openable battery compartment with a damper provides for easy and quick maintenance access to the battery unit.



Drive and hydraulic motor controllers have been located together for quick access and easy servicing. They have also been made more resistant to dust and water.

A wide product lineup

The FB-VIII Series comes in a wide range of models, from compact classes with the superb features that the preceding series have to 3.5-ton models, reliable workhorses for handling heavy loads.

	Model	Max. capacity	Overall height
1-ton class	FB10-8	1,000 kg	2,080 mm
	FB15-8	1,500 kg	2,080 mm
	FB18-8	1,750 kg	2,080 mm
2-ton class	FB20-8	2,000 kg	2,125 mm
	FB25-8	2,500 kg	2,125 mm
	FB25-8LB	2,500 kg	2,250 mm
	FB25-8V	2,500 kg	2,100 mm
3-ton class	FB30-8	3,000 kg	2,190 mm
	FB30-8V	3,000 kg	2,100 mm
	FB35-8S	3,500 kg	2,190 mm

High-capacity model: Battery capacity 935 AH/5h

VAN model: Suitable for loading and unloading vans

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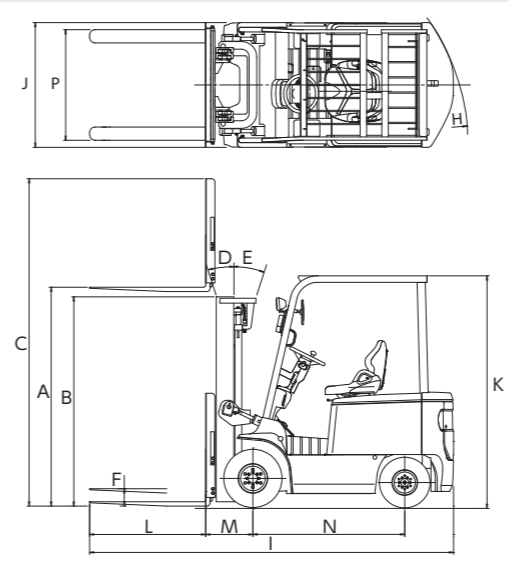
Specifications

Standard specifications

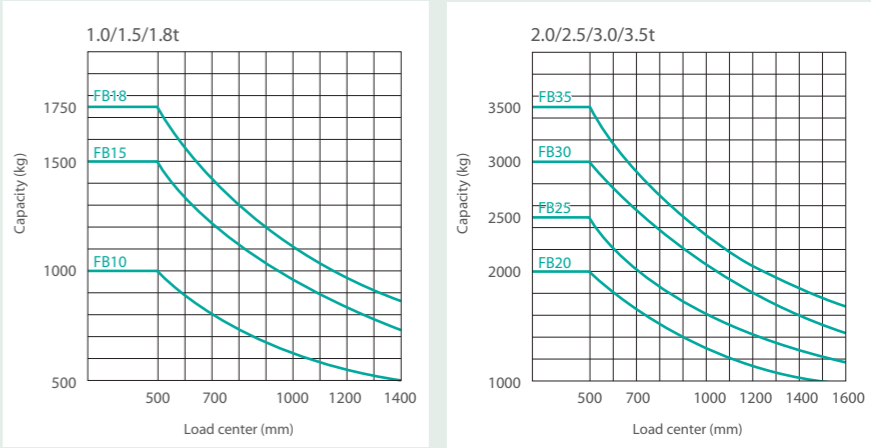
Manufacturer					UNICARRIERS												
Model					FB10-8	FB15-8	FB18-8	FB20-8	FB25-8	FB25-8LB	FB25-8V	FB30-8	FB30-8V	FB35-8S			
Characteristics	Load Capacity				kg	1000	1500	1750	2000	2500			3000		3500		
	Load Center				mm	500											
	Maximum Fork Height				mm	A	3000										
Dimensions	Free Lift			mm	F	155			110			165		170			
	Fork Size		L x W x T	mm	L	920 x 100 x 35			1070 x 122 x 40			1070 x 125 x 45		1070 x 150 x 50			
	Tilt Angle		Fwd / Bwd	deg	D/E	6/12										6/10	
	Overall Length (with Forks)				mm	I	2875		2975	3315	3355	3460		3580	3805		
	Overall Length (without Forks)				mm		1955		2055	2245	2285	2390		2510	2735		
	Overall Width				mm	J	1070			1150			1225		1380		
	Mast Height Fork Lowered				mm	B	1995			2030		2180	2030	2075		2135	
	Overall Height Fork Raised				mm	C	4030										4260
	Overhead Guard Height				mm	K	2080			2125		2250	2100	2190	2100	2190	
	Turning Radius (Outside)				mm	H	1800		1890	2070	2100	2200		2290		2500	
Fork Overhang (Centerline of front axle to front face of forks)					mm	M	375			435			480		500		
Performance	Speeds	Travel Max <sup>1)</sup> (Fwd / Rvs.)	With Load	km/h		14.0					13.5		14.0				
			Without Load	km/h		16.0					15.5		15.0				
		Lifting <sup>1)</sup>	With Load	mm/s		390	350	330	290	265			290		240		
			Without Load	mm/s		580			510			490		410			
Weight	Total Weight (without battery)				kg		2030	2050	2100	2700	3030	2960	2965	3530	4015		
	Chassis	Tires	Size	Front		6.00 – 9 - 10PR		6.00 – 9 - 12PR		21 x 8 – 9 – 16PR			28 x 9 – 15 – 14PR		250 - 15 - 16PR		
			Rear		16 x 6 – 8 – 10PR			18 x 7 – 8 – 14PR						18 x 7 – 8 (SE)			
Wheelbase				mm	N	1250		1350	1400		1545		1600	1800			
Fork Spread (Outside)					mm	P	200 - 920			245 - 1020			250 - 1090		300 - 1090		
	Tread		Front	mm		910			955			1000		1140			
			Rear	mm		900			950								
Under clearance		at lowest point			mm		90			100		90					
Electric Motors and Control	Battery <sup>2)</sup> (STD capacity type)		Voltage / Capacity (5-hour rating)		V / AH		48 / 330	48 / 400		48 / 450	48 / 565	48 / 935	48 / 865	72 / 450			
	Electric Motors	Drive motor (AC)		kW / 60 min.			6.9			8.5			11.9				
		Hydraulic motor (AC)		kW / 5 min.			9.0							14.0			
	Control Type	Drive					FET inverter										
				Load handling			FET inverter										
Power steering					FET chopper												

NOTE: 1) Above figures are measured at "Super-mode" operation. 2) Batteries are optional equipment.

Standard dimensions



Load chart



These specifications are subject to change without notice.

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