

Large-size Forklift Trucks

25-30 ton

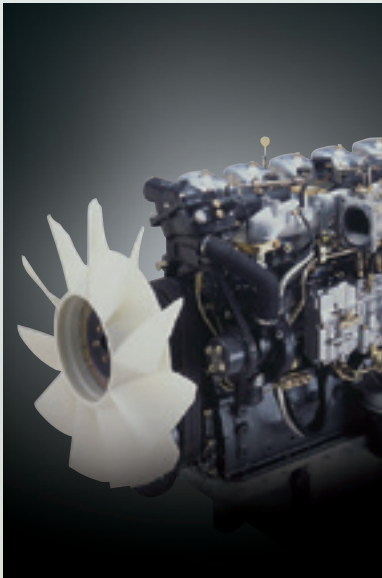
FD250-3 FD300-3



Successor to Our Top Product

The Long-time best-selling products prove the "trust" of users.

The 25-ton TCM forklift truck has been ranked as one of the best-selling product in its class since it's debut in 1989. Our dear customers' affinity for this forklift is due to its undoubtedly superior functionality, durability and industry leading technologies as well as the detailed knowledge and extensive experience at our customer's worksites. We are very proud to release the advanced FD300 following the recently redesigned FD250. FD250 and FD300, equipped with the engine with the performance clearing the emission levels required in EU stage II , US EPA Tier 2 and Japan stage II regulations, wider front and rear visibility and 4-speed automatic transmission – are indeed the leading “Comfortable Forklift Trucks” for this age of advanced material handling.



Innovative engine, clearing stringent environmental regulations.

The mounted 165kW inter-cooler turbo diesel engine is the largest capacity in its class, with sufficient power able to conduct continued rigorous work.

Total displacement	11,940 _{cc}
Rated horsepower	165 _{kW} /2,100 _{rpm} 224 _{ps} /2,100 _{rpm}
Maximum torque	980 _{N·m} /1,400 _{rpm}



TCM yellow color available as an option.

The photo shows both FD250-3 and FD300-3 with side shifters fork positioners.

Operator-friendly and comfortable cabin space designed with thoughtful consideration of the operator's difficult job.

Forklift Trucks Comfortable for Operators

Superb ride and low vibration in the cabin due to the adoption of a floating cockpit and deluxe seat.

Industry top-class lifting speeds

FD250	360mm/s (without load)	330mm/s (with load)
FD300	280mm/s (without load)	250mm/s (with load)

LIFTING
SPEED

FD250
330/360
mm/s
(with load / without load)

FD300
250/280
mm/s
(with load / without load)

Deluxe seat

Pillar-less cabin

Viscous-mount low
vibration system
(silicon oil filled)



Low-noise, lower vibration cabin

A liquid-filled rubber mount (Viscous-mount) between the driver's seat and the frame. In addition, an integrated rubber mount in the hydraulic part reduces noise and vibration significantly.

Large-capacity air conditioner (standard equipment)

Very pleasant and relaxing space in the cabin due to a large-capacity air conditioner.

Cooling Efficiency

4.7kW



Pillar-less cabin and compact meter panel

Excellent visibility achieved by absence of front and rear pillars. Compact meter panel further contributes to clean, wider front visibility.

Integrated switch panel board

Recognition of worksites and operating efficiencies is substantially improved due to the compactly integrated layout of all switches on the right side of the operator.

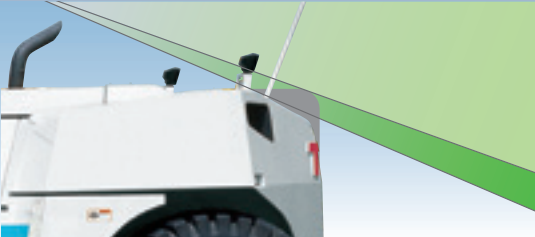


Flat and wider step board

Easier and safer entry and exit.

Improved rear visibility

Rear visibility is largely improved due to reshaping of the counter weight.



Single steering cylinder system

Deluxe multi-functional seat as standard equipment

Well-cushioned deluxe seat with various functions such as reclining, forward/backward sliding, smooth swiveling, upward/downward adjustment, and adjustable armrest position.



Closed wet-disc brakes



Simpler operation reduces physical fatigue even in harsh working conditions.

Operation with higher work efficiency as well as enhanced safety

These large forklift trucks are capable of quickly, easily, and powerfully performing very heavy load operations such as handling metal materials and marine containers.

Hydraulic pilot-type control valves newly adopted for operation levers

Possible to operate and control the vehicle with light touches of the hydraulic assist lever and armrest. Difficult operations can be performed by fingertip maneuvers, as well.

Lever-handling force reduced by **8.2% - 0.7kg**

- ① Lifting ② Tilting ③ Side Shifter(optional)
- ④・⑤ Fork Positioner(optional)

Electronic parking system



Easy to apply parking brake electronically. In addition, the electronic brake is automatically switched on when the engine halts, avoiding negligent braking when the vehicle stops.

Larger fuel tank

Extended refueling interval contributes to work efficiency.

600 liters



4-speed automatic transmission (duo-stick system)

Possible to select either 1st gear → 4th gear, or 2nd gear → 4th gear by automatic transmission, similar to passenger cars. The new duo-stick lever system can perform backward and forward shifting while handling the steering wheel.

D(P)	First ⇔ Second ⇔ Third ⇔ Fourth
D(E)	Second ⇔ Third ⇔ Fourth
First gear	Fixed at the first speed
Second gear	Fixed at the second speed

(P)Power mode drive (E)Economy mode drive

Steering wheel with smaller turning radius

Possible to charge cargo-handling modes very easily due to the light and sharp hydraulic steering system.

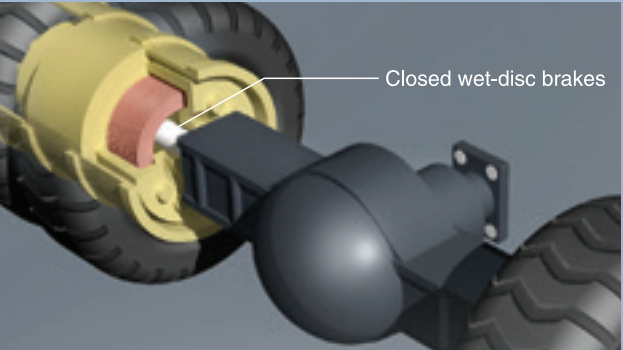
Reduced steering operation force **1.0kg**
3.8 turns

(for FD250)



Easier vehicle inspection and maintenance

Both inspection and maintenance of the engine can be easily performed, as the hood opens widely and the side panels open three ways. Moreover, a centralized oil supply system for the mast and a hinged wide cover for the battery box were adopted. Furthermore, inspection and cleaning of the air-cleaner, attached to the upper part of the hood, can be accomplished conveniently.

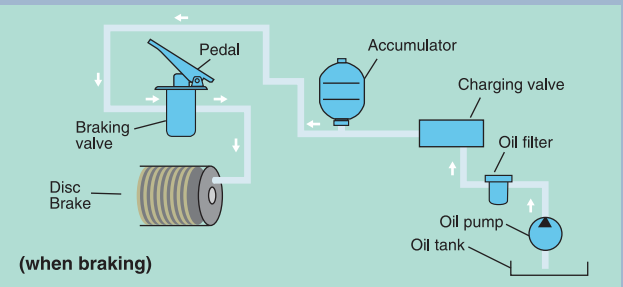


Closed wet-disc brakes

A newly adopted brake with compulsory cooling system. Stable braking and reduced maintenance cost compared to the lining friction loss of a drum braking system.

Full-power braking system

A full-power braking system has been adopted, eliminating the need for air pressure circuit and brake oil, thereby improving maintenance costs dramatically.



Single steering cylinder system

The single steering cylinder system makes stationary steering easy, resulting in comfortable steering maneuverability.





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SPECIFICATIONS

FD250-3 FD300-3



STANDARD SPECIFICATIONS

Characteristics	1	Manufacturer				UNICARRIERS		UNICARRIERS	
	2	Model				FD250-3		FD300-3	
	3	Load Capacity		kg		25000		30500	
	4	Load Center		mm		1220		1220	
	5	Power Type				Diesel		Diesel	
	6	Operator Position				Seated		Seated	
	7	Tire Type	Front/Rear			Pneumatic		Pneumatic	
	8	Wheels(x=driven)	Front/Rear			4x / 2		4x / 2	

Dimensions	9	Maximum Fork Height		mm	A	3000		3000	
	10	Free Lift		mm		0		0	
	12	Overall length : with forks		mm	C	8750		9135	
	13	Fork Size	L x W x T	mm		2440 x 310 x 105		2440 x 330 x 108	
		Fork Spread(Outside)	Max. / Min.	mm	B	2750 / 950		2750 / 1250	
	14	Tilt Angle	Fwd. / Bwd.	deg		6 / 12		6 / 12	
	15	Overall length : without forks		mm		6300		6685	
	16	Overall Width		mm	D	3070		3460	
	17	Mast Lowered Height		mm	T	3750		3565	
	18	Mast Extended Height		mm	E	5250		5265	
	19	Cabin Height		mm	M	3590		3670	
		Overhead Guard Height		mm		-		-	
	20	Operator's Seat Height		mm		2400		2475	
	21	Turning Radius(Outside)		mm	R	5900		6310	
	22	Fork Overhang(Centerline of front axle to front face of forks)		mm		985		1070	
		Rear Overhang		mm		925		1025	
	23	Intersectina Aisle		mm		5000		5330	

Performance	24	Speeds	Travel speed (Fwd. / Rvs.)	1st	km/h		7.5	7.0	6.0	5.5
				2nd	km/h		13.0	12.0	10.0	9.0
				3rd	km/h		21.0	19.5	16.0	15.0
				4th	km/h		34.0	32.0	26.0	24.5
	25	Lifting		Full Load	mm/sec		330		250	
				No Load	mm/sec		360		280	
	26	Lowering		Full load	mm/sec		400 - 600		400 - 600	
				No Load	mm/sec		400 - 600		400 - 600	
	28	Max. Drawbar Pull		Full Load	kN		163		197	
				No Load	kN		118		148	
30	Max. Gradeability*			Full Load	%		22		20	
				No Load	%		27		26	

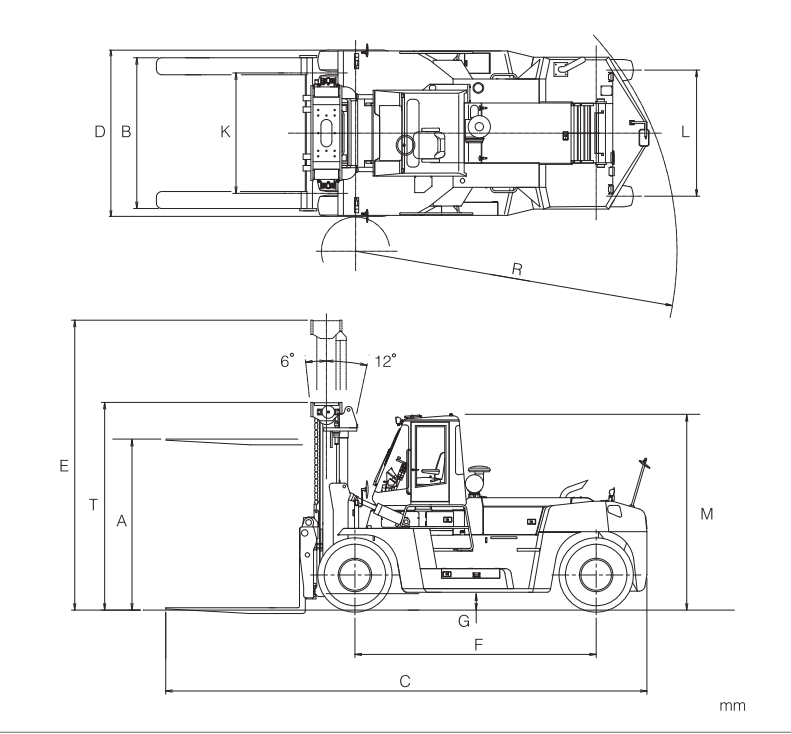
Weight	32	Total Weight			kg		34330	43310
	33	Weight Distribution	Full Load	Front	kg		55000	67330
				Rear	kg		4330	6480
	34	Weight Distribution	No Load	Front	kg		17330	21470
				Rear	kg		17000	21840

Chassis & Wheels	35	Tires	Number	Front / Rear			4 / 2	4 / 2
	36		Size	Front			14.00 - 24 - 24PR(ID)	16.00 - 25 - 32PR(ID)
	37			Rear			14.00 - 24 - 24PR(ID)	16.00 - 25 - 32PR(ID)
	38	Wheelbase			mm	F	4400	4600
	39	Tread	Front	mm	K	2200	2440	
			Rear	mm	L	2300	2530	
	Overhead Clearance			mm		1115	1115	
	Hood Height			mm		2050	2150	
	Drawbar Height			mm		780	870	
	Step Height / Floor Height			mm		-	-	
	40	Underclearance	Min. without Load		mm		300	315
	41		Center of Wheelbase		mm	G	330	385
	42	Brake	Service(Foot)				Built in axle - multiple wet disc	Built in axle - multiple wet disc
	43		Parking				Built in mission - wet disc	Built in mission - wet disc

Engine & Transmission	45	Battery		Voltage / Capacity(5HR)	V / Ah		2 x 12 / 108		2 x 12 / 108	
	49	Internal Combusion Engine	Make / Model				MITSUBISHI FUSO 6D24T with turbo-charger / inter-cooler		MITSUBISHI FUSO 6D24T with turbo-charger / inter-cooler	
	50		Rated Output / Engine Speed		kW/r.p.m.		165 / 2100		165 / 2100	
	51		Maximum Torque / Engine Speed		N-m/r.p.m.		980 / 1400		980 / 1400	
			Number of Cylinder)				6		6	
	52		Piston Displacement		lit .		11.940		11.940	
			Alternator output		A		50		50	
			Fuel Tank Capacity		Liter		600		600	
			Type				Power - shift		Power - shift	
	55	Transmission		Stage	Fwd. / Rvs.		4 - 4		4 - 4	
57	Operating Pressure	For Attachments			MPa(psi)		20,6		20,6	

Note : *Computed values

Dimensions



Mast Model	Capacity		Max. Fork Height	Overall Mast Height (lowered)		Overall Mast Height (raised)		Tilt Angle	Service Weight		
	Load center 1220mm			FD250-3	FD300-3	FD250-3	FD300-3		Fwd / Bwd	FD250-3	FD300-3
	kg	kg									
VM300	25000	30500	3000	3750	3765	5250	5265	6 / 12	34330	43310	
VM350	25000	30500	3500	4000	4015	5750	5765	6 / 12	34530	43560	
VM400	25000	30500	4000	4250	4265	6250	6265	6 / 12	34740	43810	
VM450	25000	30500	4500	4500	4515	6750	6765	6 / 12	35230	44470	
VM500	25000	30500	5000	4750	4765	7250	7265	6 / 12	35430	44670	
VM550	24000	30500	5500	5000	5015	7750	7765	6 / 12	35640	44980	
VM600	20000	30500	6000	5250	5265	8250	8265	6 / 12	35830	45230	

Standard Equipment and Accessories

Equipment

- Automatic 4-speed powershift transmission
- Bonnet gas dumper with locking stay
- Brake cooling oil level view gauge
- Cartridge type filters; engine fuel, engine oil, mission oil & hydraulic oil
- Coolant reservoir tank
- Cyclopack type double element air cleaner
- Delux suspension seat
- Drawbar device in counter weight
- Electrically-controlled parking brake
- Engine oil dipstick
- Fork positioner(manual type)
- Front dual drive wheels
- Full hydorostatic power steering
- Heavy duty pneumatic tires
- Hydraulic oil level view gauge
- Large capacity fuel tank(600 liters)
- Load check valve
- Steel cabin with air-conditioner
- Tilt adjustable steering column
- Tilt cylinder lock valve
- Transmission oil dipstick
- Wet disc brake
- Wide view 2-stage mast
- 2440mm length forks

Accessories

- Buck-up buzzer
- Deluxe floor mat
- Electric horn
- Front combination lights turn signal & clearance
- Head lights
- Operator tool kit
- Rear combination lights, turn signal, tail, stop, back-up
- Rear reflectors
- Rear under-view mirror
- Room mirror
- Side view mirrors
- Turn signal lights(front)
- Working lights(front, rear)

Switch & Controls

- Automatic transmission mode select switch power mode & economy mode
- Electrically-controlled direction change lever inc. neutral safety lock device
- Electrically-controlled parking brake switch
- Lift lever
- Lighting switch
- Speed change hold switch (1st fixed / 2nd fixed / automatic speed shift)
- Starter switch inc. pre-heating & main switch
- Tilt lever
- Turn signal switch

Optional Equipment and Accessories

Equipment

- Alternative fork length
- Alternative mast height
- Central greasing system
- Delux suspension seat with seat belt
- Detachable Ram / Fork attachment
- Fork positioner(hydraulic cylinder type)
- Fork positioner(hydraulic motor type)
- Fork positioner(hyd. cylinder) with side shifter
- Fork positioner(hyd. motor) with side shifter

- Heater & defroster
- Large capacity alternator
- Large capacity battery
- Load weight indicator
- Overhead guard type cab. with wide rubber floor mat
- Ram attachment
- Side shifter
- Split ram attachment

Instruments

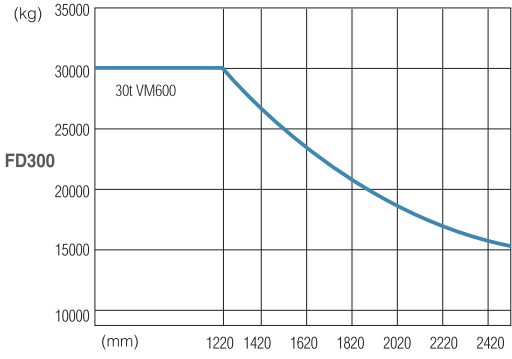
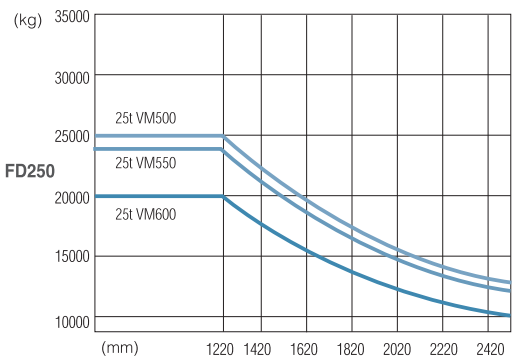
- Air cleaner clogging warning indicator
- Brake oil pressure warning indicator
- Brake oil temperature warning light
- Charge indicator
- Engine diagnosis monitor lamps
- Engine oil pressure warning indicator inc. engine oil filter clogging warning
- Engine pre-heating lamp
- Engine thermometer
- Fuel meter
- Hi-beam indicator(head lights)
- Hourmeter
- Parking brake indicator
- Speedometer
- Transmission oil temperature warning indicator
- Turn signal indicator
- Working light indicator

Accessories

- Custom paint-works
- Fire extinguisher
- Rotating warning yellow light(beacon)

Others on request

Load charts



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