

**TCM**

**Heavy-Duty FORKLIFT TRUCKS**

**10-16 ton**

**FD100-3H FD115-3 FD120-3 FD135-3**

**FD150S-3 FD160S-3**





# Reliable maneuverability & safe





# y. Superb performance undar han



## Three Speed Automatic Transmissions

By automated speed control, you can comfortably drive the truck just same as passenger cars.

### (A) Finger Touch Shift Lever

Soft touch lever changes, achieved by magnetic valves.

### (B) Easy Drive Mode Selections

Interchangeable by simple switch operations between power mode (1st → 2nd → 3rd gear) and economy mode (2nd → 3rd gear)

### (C) Constant Travel Speed

By a dial switch, able to get the most suitable speed you require. (1st, 2nd, and automatic changing speeds)

### (D) Combined Type Switch Lever

(Lighting and Turn Signal)  
Turn-signal with self-cancelling mechanism

### (E) Electric Parking Brake System

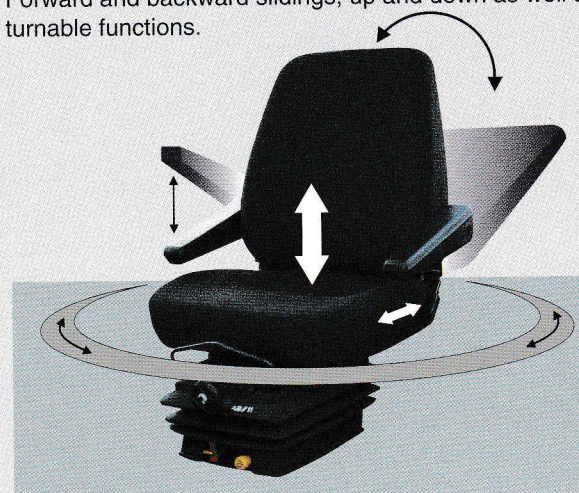
Brake to be easily on by soft-touch electric switch (Only 0.5kg)

## New Integrated Instrument Panel



## Deluxe Multi-Functional Driver Seat with Suspension (Optional)

Forward and backward slidings, up and down as well as turnable functions.



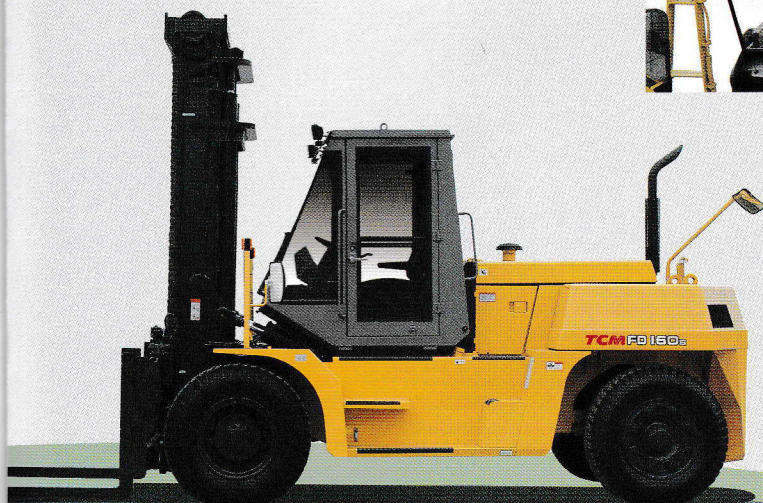
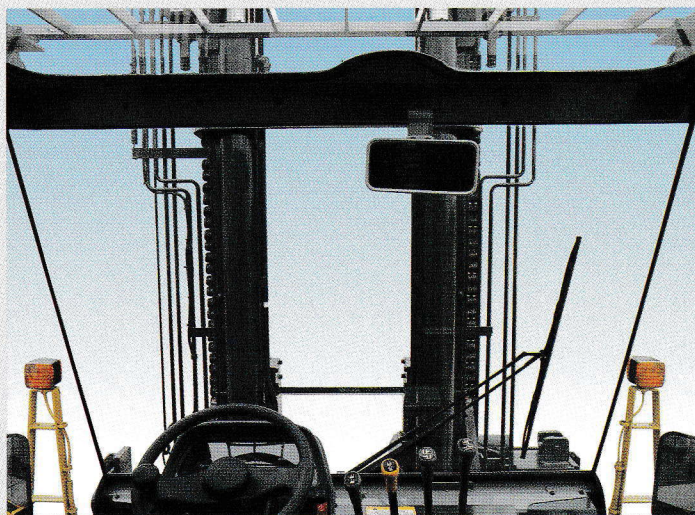


# working condition.

## Improved Visibility by Pillar-less Cabin (Optional)

No front nor rear pillars secure wider visibility.  
Front visibility improved by 10 percent.  
(compared to conventional models)

No pillar cabin substantially contributes  
to increasing safety cargo handlings as  
well as traveling.



## Small Steering Wheel Diameter

Improved steering wheel contribute to much  
comfortable physical feeling.



## Large Capacity Air Conditioner (Optional)

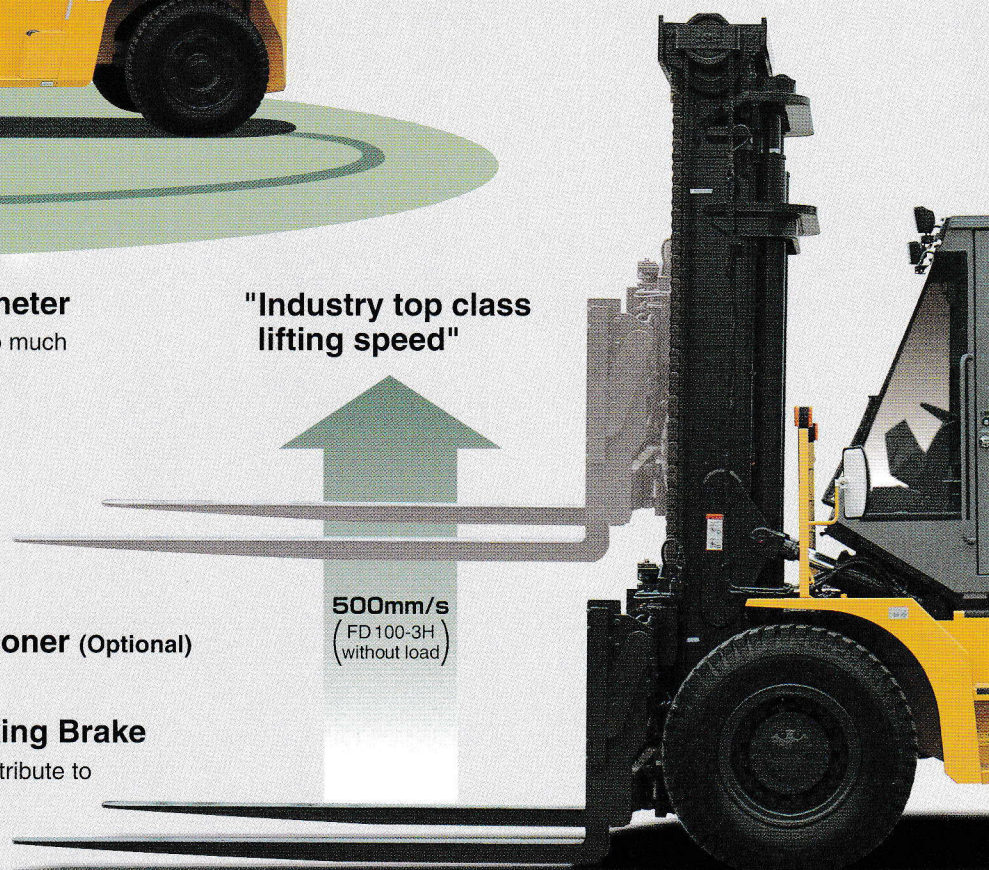
Cooling capacity: 4000kcal/h

## Dependable Wet-Disc Parking Brake

No pad adjustments substantially contribute to  
saving of maintenance cost.

"Industry top class  
lifting speed"

500mm/s  
(FD 100-3H  
without load)



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# The Newly Innovated Engine.

It's clearing the second stage emission controls  
in three major industrial regions in the world  
(the U.S., Europe & Japan)

## Powerful Engine

114kW(156PS)/2000r.p.m  
537N·m (57kgf·m)1800r.p.m



## Improved Drawbar Pull and Gradeability!

### Max. Drawbar Pull

122kN (12,500kgf)  
(27,560lbf)

(FD100-3H with load)

### Gradeability at 1.6km/h (1mph)

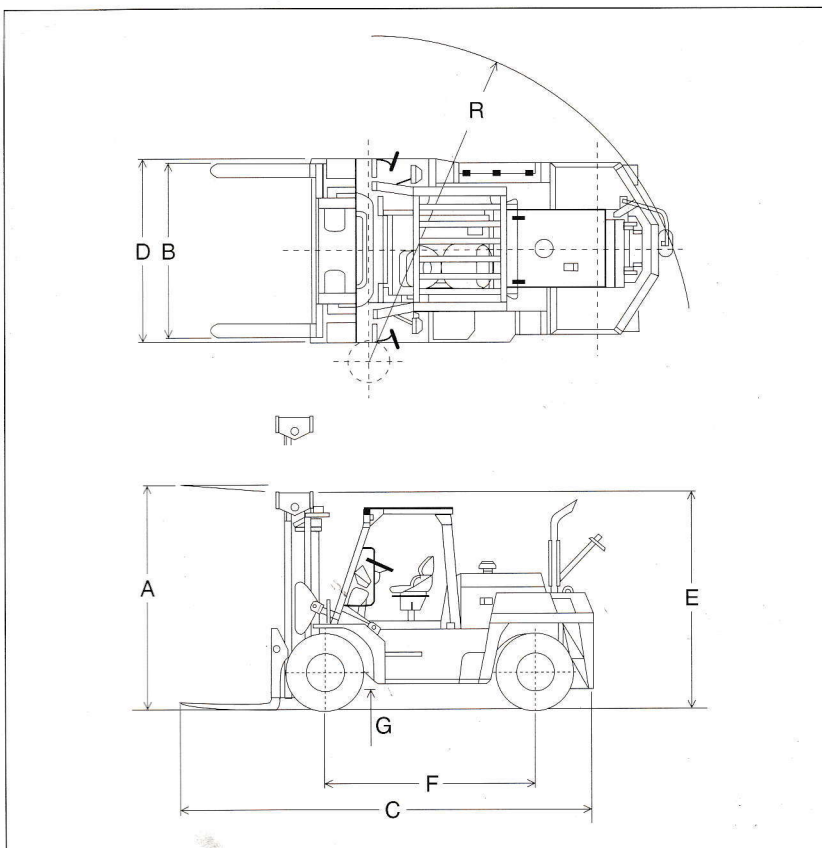
47%(25.3°slope)

(FD100-3H with load)

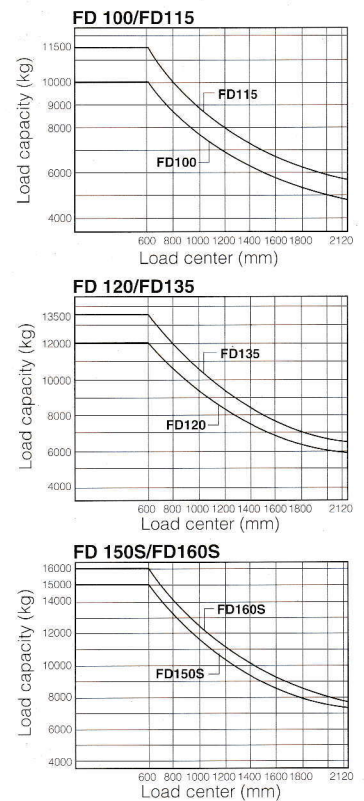




## ■ Dimensions



## ■ Load Charts



## ■ Standard Specifications

Model			FD100-3H	FD115-3	FD120-3	FD135-3	FD150S-3	FD160S-3
Performance	Load capacity	kg (lbs)	10000 (22000)	11500 (25500)	12000 (26500)	13500 (30000)	15000 (33000)	16000 (35000)
	Load center	mm (in)	600 (24)	600 (24)	600 (24)	600 (24)	600 (24)	600 (24)
	Maximum fork height	mm (in)	A 3000 (118.1)	3000 (118.1)	3000 (118.1)	3000 (118.1)	3000 (118.1)	3000 (118.1)
	Lifting speed : with load	mm/s (fpm)	460 (90.5)	450 (88.6)	450 (88.6)	350 (68.9)	340 (66.9)	340 (66.9)
	Mast tilt angle : forward / backward	deg	6 / 12	6 / 12	6 / 12	6 / 12	6 / 12	6 / 12
	Max. Travel speed	km/h (mph)	34 (21.1)	34 (21.1)	34 (21.1)	34 (21.1)	34 (21.1)	34 (21.1)
	Lateral fork adjustment (outside)	mm (in)	B 400 ~ 2140 (15.7~84.3)	400 ~ 2140 (15.7~84.3)	400 ~ 2140 (15.7~84.3)	470 ~ 2210 (18.5~87.0)	470 ~ 2210 (18.5~87.0)	470 ~ 2210 (18.5~87.0)
	Turning radius (outside)	mm (in)	R 4000 (157.5)	4000 (157.5)	4000 (157.5)	4300 (169.3)	4300 (169.3)	4450 (175.2)
Dimensions & Weight	Gradeability : with load (1.6km/h)	%	47	39	38	33	30	29
	Overall length : with fork	mm (in)	C 5490 (216.1)	5505 (216.7)	5505 (216.7)	5775 (227.4)	5775 (227.4)	5920 (233.1)
	Overall length : without fork	mm (in)	4270 (168.1)	4270 (168.1)	4270 (168.1)	4545 (178.9)	4545 (178.9)	4685 (184.4)
	Fork size : L x W x T	mm (in)	1220 x 180 x 75 (48.0 x 7.1 x 3.0)	1220 x 180 x 90 (48.0 x 7.1 x 3.5)	1220 x 180 x 90 (48.0 x 7.1 x 3.5)	1220 x 200 x 85 (48.0 x 7.9 x 3.3)	1220 x 200 x 85 (48.0 x 7.9 x 3.3)	1220 x 200 x 90 (48.0 x 7.9 x 3.5)
	Overall width	mm (in)	D 2240 (88.2)	2280 (89.8)	2280 (89.8)	2360 (92.9)	2360 (92.9)	2360 (92.9)
	Overall height : mast	mm (in)	E 2900 (114.2)	2920 (115.0)	2920 (115.0)	3150 (124.0)	3150 (124.0)	3150 (124.0)
	Overall height : overhead guard	mm (in)	2740 (107.9)	2760 (108.7)	2760 (108.7)	2775 (109.3)	2775 (109.3)	2775 (109.3)
	Wheelbase	mm (in)	F 2800 (110.2)	2800 (110.2)	2800 (110.2)	3100 (122.0)	3100 (122.0)	3100 (122.0)
Engine & Transmission	Ground clearance	mm (in)	G 250 (9.8)	270 (10.6)	270 (10.6)	255 (10.0)	255 (10.0)	255 (10.0)
	Total weight	kg (lbs)	13300 (29330)	14420 (31800)	14730 (32480)	15900 (35060)	16800 (37040)	17060 (37620)
	Internal combustion engine : model		ISUZU 6BG1T Diesel Engine					
	Internal combustion engine : piston displacement	lit. (in <sup>3</sup> )	6.494 (396.3)					
Tire & Brake	Internal combustion engine : rated output / r.p.m.		114kW (156PS) / 2000r.p.m. (SAE GROSS 117kW (157HP) / 2000r.p.m.)					
	Internal combustion engine : maximum torque / r.p.m.		537N·m (57kgf·m) / 1800r.p.m.					
	Transmission : type		Automatic power-shift transmission					
	Transmission : number of speed		3 - 3 (Fwd / Rvs)					
Tire & Brake	Tire size		9.00-20-14PR	10.00-20-16PR	10.00-20-16PR	11.00-20-16PR	11.00-20-16PR	11.00-20-18PR
	Brake : service		Air-over-hydraulic internal expansion					
	Brake : parking		Built in transmission, wet multiple disc brake					
Steering system			Full hydrostatic power steering					



## Wide View Mast

Mast  Model	Capacity												Max. Fork Height		Overall Mast Height (lowered)							
	Load center 600mm (24in)																					
	FD100-3H		FD115-3		FD120-3		FD135-3		FD150S-3		FD160S-3		FD100-3H		FD115-FD120-3		FD135-FD160S-3					
	kg	lbs	kg	lbs	kg	lbs	kg	lbs	kg	lbs	kg	lbs	mm	in	mm	in	mm	in	mm	in		
VM300	10000	22000	11500	25500	12000	26500	13500	30000	15000	33000	16000	35000	3000	118.1	2900	114.2	2920	115.0	3150	124.0		
VM350	10000	22000	11500	25500	12000	26500	13500	30000	15000	33000	16000	35000	3500	137.8	3150	124.0	3170	124.8	3400	133.9		
VM400	10000	22000	11500	25500	12000	26500	13500	30000	15000	33000	16000	35000	4000	157.5	3400	133.9	3420	134.6	3650	143.7		
VM450	10000	22000	11500	25500	12000	26500	13500	30000	15000	33000	16000	35000	4500	177.2	3650	143.7	3670	144.5	3900	153.5		
VM500	10000	22000	11500	25500	12000	26500	13500	30000	15000	33000	16000	35000	5000	196.9	3900	153.5	3920	154.3	4150	163.4		
VM550	9000	19800	10350	22800	10800	23800	12150	26700	13500	30000	14400	31700	5500	216.5	4150	163.4	4170	164.2	4400	173.2		
VM600	8000	17600	9200	20200	9600	21100	10800	23800	12000	26500	12800	28200	6000	236.2	4400	173.2	4420	174.0	4650	183.1		

Mast Model	Overall Mast Height (raised)						Tilt Angle	Service Weight												
	FD100-3H		FD115-FD120-3		FD135-FD160S-3			Fwd / Bwd	FD100-3		FD115-3		FD120-3		FD135-3		FD150S-3		FD160S-3	
	mm	in	mm	in	mm	in			kg	lbs	kg	lbs	kg	lbs	kg	lbs	kg	lbs	kg	lbs
VM300	4400	173.2	4420	174.0	4650	183.1	6 / 12	13300	29330	14420	31800	14730	32480	15900	35060	16800	37040	17060	37620	
VM350	4900	192.9	4920	193.7	5150	202.8	6 / 12	13400	29550	14520	32010	14830	32700	16020	35320	16920	37300	17180	37880	
VM400	5400	212.6	5420	213.4	5650	222.4	6 / 12	13500	29770	14620	32240	14930	32920	16250	35830	17150	37810	17410	38390	
VM450	5900	232.3	5920	233.1	6150	242.1	6 / 12	13750	30320	14870	32790	15180	33470	16390	36140	17290	38120	17550	38690	
VM500	6400	252.0	6420	252.8	6650	261.8	6 / 12	13850	30540	14970	33000	15280	33690	16490	36360	17390	38340	17650	38920	
VM550	6900	271.7	6920	272.4	7150	281.5	6 / 12	13950	30760	15070	33230	15380	33910	16600	36600	17500	38580	17760	39160	
VM600	7400	291.3	7420	292.1	7650	301.2	6 / 12	14050	30980	15170	33450	15480	34130	16710	36840	17610	38830	17870	39400	

## STANDARD EQUIPMENT AND ACCESSORIES

### [Equipment]

- Adjustable suspension seat with seat belt
- Air-dryer for brake line
- Cartridge type air, fuel, engine oil, converter oil and hydraulic filters
- Coolant recovery system
- Cyclopack type double element air cleaner
- Cylinder type bonnet latch
- Drawbar hook
- Durable overhead guard
- Electrically-controlled parking brake
- Engine after glow system
- Engine auto glow system
- Engine oil dipstick
- Front dual drive wheels
- Full hydrostatic power steering
- Hydraulic oil gauge (view level)
- ISUZU diesel engine with turbo-charger
- Lift circuit flow control valve
- Load check valve
- Overhead exhaust system
- Pneumatic tires
- Power brake booster
- TCM automatic 3-speed powershift transmission
- Tilt adjustable steering post
- Tilt lock valve
- Torque converter oil dipstick
- Wide view mast
- 1220mm forks

### [Accessories]

- Back-up buzzer
- Electric horn
- Head lights
- Operator tool kit
- Rear combination lights (turn signal, tail, stop, back-up and side lights)
- Rear reflectors
- Rear under-view mirror
- Rear view mirrors
- Seat adjust lever
- Turn signal lights (front)

### [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
- Light switch
- Preheater switch (inc. starter, main switch)
- Speed change hold switch (1st fixed / 2nd fixed / Automatic speed shift)
- Tilt lever
- Turn signal lever (inc. dimmer and head light switch)

### [Instruments]

- Air cleaner clogging warning indicator
- Brake air pressure meter
- Brake air pressure warning indicator
- Brake oil level warning indicator
- Charge indicator
- Converter oil temperature warning indicator
- Engine oil pressure warning indicator (inc. engine oil filter clogging warning)
- Engine water temperature meter
- Fuel meter
- Hourmeter
- Parking brake indicator
- Speedometer
- Turn signal indicator

## OPTIONAL EQUIPMENT AND ACCESSORIES

### [Equipment]

- CFC free air-conditioner
- Exhaust purifying muffler
- Fork extension sleeves
- Fork positioner (hydraulic motor type)
- Fork positioner (manual type)

- Heater & defroster
- High mast
- Long forks
- Side shifting device
- Steel cabin

### [Accessories]

- Central greasing system (manual pump type)
- Fire extinguisher
- Rotating warning light
- Working light (front, rear)

\* TCM products and specifications are subject to change without notice