

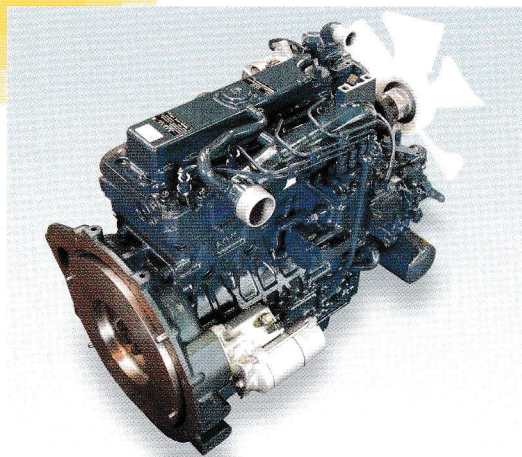
TCM

**Smart Design, Smart Reliability
Smart Performance**



Smart Machine

**Diesel-Powered Forklift Trucks
2-3 ton
(Counter-Balanced Type)**



Newly adopted engine "KUBOTA V2403" clearing stringent environmental regulations.

New engine, compliant with global environmental regulations

New emission control and engine management system deliver excellent power, economy and reliability while meeting Euro stage IIIA, EPA interim Tier-4 and China 2nd stage regulations.

Design for convenient inspection and simple maintenance

All main components and parts are located on the same side which allows for easy maintenance.

Piston Displacement : 2434cc

Rated Horsepower : 36.5kW / 2600r.p.m.

Rated Torque : 158.6N-m / 1600r.p.m.

ENHANCED OPERATOR COMFORT



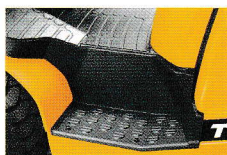
Expansive floor space for easier foot maneuvering

An amazing floor space by placing tilt cylinders under the floor. This gives a smooth footwell addition to easy entry and exit.



More convenient parking lever

The lever is positioned to the right of the steering wheel for easy entry and exit. A double-action brake release on the lever.



Easy entry and exit from an extra-wide-step

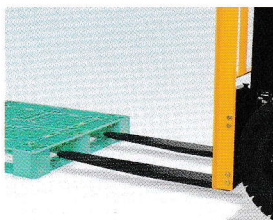
The secure step with enlarged foot space enables greater comfort and less fatigue while entering and exiting the vehicle.



Multifunctional suspension seat

Features include reinforced driver support, operator weight balance adjusting, reclining, and seat belt.

SUPERIOR MANEUVERABILITY AND ASSURED SAFETY



Innovative fork-landing mechanism

(Available for VM type mast) The fork-lowering speed decelerates at a height of approximately 150mm above the ground enabling accurate placement of the forks into the load fork pockets or pallet.



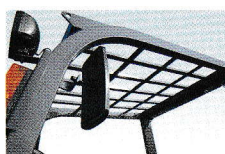
Reduced fatigue due to a semi-circular steering wheel

The A smaller diameter (300mm outer diameter) steering wheel gives improved vehicle maneuverability. In addition, this compact steering wheel makes it much easier to get on and off the truck.



High-mounted rear combination lights

The brake lights are easily visible at the top of the overhead guard. Recessed for protection, they are vibration resistant for long bulb life.



Single-piece headguard

The front and rear pillars as well as root are all welded together in a single-piece construction to give additional strength the entire structure.



Meter panel optimally located to the right of the driver's seat

The meter panel is located on the top right side of the dashboard for easier readability by the operator.



Anti-slip mat on the hood

A rubber strip is attached to the hood to prevent slippage while stepping on and off.



Meter panel with LED indicators

The LED has a longer life and is easy to read even during daylight shift operation.



Portable glove box



Cup holder

STANDARD SPECIFICATIONS

STANDARD EQUIPMENT AND ACCESSORIES

Characteristics	1 Manufacturer				TCM				
	2 Model				FD20T3K	FD25T3K	FD30T3K		
	3 Load Capacity				kg	2000	2500	3000	
	4 Load Center				mm	500	500	500	
	5 Power Type				Diesel				
	6 Operator Position				Seated				
	7 Tire Type				Pneumatic				
Dimensions	8	Wheels (X=driven)	Front / Rear		2 × / 2				
	9	Maximum Fork Height			mm	3000			
	10	Free Lift			mm	110		165	
	13	Fork Size	L × W × T	mm	1070 × 122 × 40		1070 × 125 × 45		
		Fork Spread (Outside)	Max. / Min.	mm	1020 / 245		1090 / 250		
	14	Tilt Angle	Fwd / Bwd	deg	6 / 12				
	15	Length to Fork Face			mm	2485	2555	2705	
	16	Overall Width			mm	1150		1225	
	17	Mast Height Fork Lowered			mm	2030		2075	
	18	Mast Height Fork Raised			mm	4030		4250	
	19	Overhead Guard Height			mm	2070		2090	
	20	Operator's Seat Height			mm	1045		1070	
	21	Turning Radius (Outside)			mm	2170	2240	2400	
	22	Load Distance(Centerline of front axle to front face of forks)			mm	450		480	
	Performance		Rear Overhang			mm	435	505	525
23		Basic Right Angle Stacking Aisle Width			mm	3890	3960	4150	
24		Speeds	Travel Max. (Fwd. / Rvs.)	Full Load	km/h	18.0		19.0	
				No Load	km/h	18.5		19.5	
25			Lowering	Lifting	Full Load	mm/s	560		460
					No Load	mm/s	600		490
26					Full Load	mm/s	450		450
				No Load	mm/s	550		450	
28	Max. Drawbar Pull		Full Load	kN	16.7		14.7		
			No Load	kN	8.3		9.8		
30	Max. Gradeability*		Full Load	%	28	23	19		
			No Load	%	20	18	20		
Weight	32	Total Weight			kg	3240	3590	4160	
	33	Weight Distribution	Full Load	Front	kg	4630	5360	6350	
				Rear	kg	610	730	810	
	34		No Load	Front	kg	1440	1370	1620	
	Rear			kg	1800	2220	2540		
Chassis & Wheels	35	Tires	Number	Front / Rear		2 / 2			
			Size	Front		7.00-12-12PR(I)		28x9-15-12PR(I)	
				Rear		6.00-9-10PR(I)		6.50-10-10PR(I)	
	38	Wheelbase			mm	1600		1700	
	39	Tread		Front	mm	970		1000	
	Rear			mm	970		970		
		Backrest Height			mm	1000		1220	
		Overhead Guard Clearance			mm	1000			
		Counterweight Height			mm	1110		1130	
		Drawbar Pin Center Height			mm	530		560	
Engine & Transmission		Step Height / Floor Height			mm	435 / 655		460 / 680	
	40	Underclearance	Min. with load		mm	110		140	
			Center of wheelbase		mm	140		165	
	42	Brake	Service (Foot)			Hydraulic - Foot pedal			
	43		Parking			Mechanical - Hand lever			
	45	Battery	Voltage / Capacity (5HR)		V/AH	12 / 55			
	49	Internal Combustion Engine	Make / Model			KUBOTA V2403			
	50		Rated Hosepower / r.p.m.			36.5kW / 2600r.p.m. (49.6PS / 2600r.p.m.)			
	51		Rated Torque / r.p.m.			159N·m / 1600r.p.m. (16.2kgf·m / 1600r.p.m.)			
	52		Number of Cylinder			4			
Piston Displacement			cc	2434					
Alternator output			kW/Amp	0.48 / 40					
Fuel Tank Capacity			lit.	70					
55	Transmission	Type			Power-shift				
		Stage	Fwd. - Rvs.		1 - 1				
57	Operating Pressure	For Attachment		kg/cm2	180				

Equipment

Asbestos-free brake shoe materials
Donaldson dry type cyclopac air-cleaner
Radiator coolant reservoir
Cylinder type bonnet latch with locking function
Adjustable ORS seat with belt
Drawbar device
Engine auto glow system
Fuel water sedimenter
Full hydrostatic power steering
Durable overhead guard
Wide view 2-stage mast(VM300)
Hydraulic oil dipstick
ITA class II or class III carriage
J-lug pneumatic industrial tires
Lift circuit cut-off valve
Load backrest
Flow control valve
Return hydraulic filter
Suction hydraulic filter
Tilt lock valve
Transmission oil dipstick
Transmission oil filter
1070mm forks
2-spool control valve with pressure relief

Controls

Electric shift control lever
Lift and tilt levers
Multi-function switch lever with self-cancelling mechanism (Lighting & turn-signal)
Parking brake lever with inter-lock
Tilt adjustable steering post
Neutral safety mechanism

Accessories

Back-up buzzer
Back-up lights
Delux floor mat
Pen/Cup holder
Electric horn
Access-assisted hand grip
Front combination lights (turn signal, clearance)
Detachable and portable glove box
Head lights
High-mounted rear combination lights
Side view mirrors

Instruments and Switch

Charge indicator
Engine oil pressure warning indicator
Fuel gauge
Grow indicator
Hourmeter
Ignition key engine stop
Neutral safety switch
Fuel water sedimenter indicator
Water temperature gauge

NOTES :

Meets following major standards and code

- ISO 1074 Counter Balanced Lift Trucks, Stability & Safety Test (Int'l)
- ISO 3691 Powered industrial trucks, safety code
- JIS D6001 Industrial Lift Trucks (Japan)
- JIS D6011 Stability & Safety Test (Japan)

Overhead guard meets ISO 6055, JIS 6021

NOTE : *Computed Values

Wide View Mast VM

Mast Model	Rated Capacity 500mm load center(kg)						Max. Fork Height	Overall Mast Height		Tilting Angle F/B	Service Weight(kg)								
	FD20T3K		FD25T3K		FD30T3K			(1) Lowered	Raised with Backrest		FD20T3K			FD25T3K			FD30T3K		
	PNEUMATIC	UNIQUE(SE)	PNEUMATIC	UNIQUE(SE)	PNEUMATIC	UNIQUE(SE)					S	DD	SDD	S	DD	SDD	S	DD	SDD
VM250	2000	2000	2500	2500	3000	3000	2500	1780	3530	6-10	3200	3305	3320	3550	3655	3670	4120	4155	4270
VM270	2000	2000	2500	2500	3000	3000	2700	1880	3730	6-10	3215	3320	3335	3565	3670	3685	4135	4170	4285
VM300	2000	2000	2500	2500	3000	3000	3000	2030	4030	6-12	3240	3345	3360	3590	3695	3710	4160	4195	4310
VM330	2000	2000	2500	2500	3000	3000	3300	2180	4330	6-12	3265	3370	3385	3615	3720	3735	4185	4220	4335
VM350	2000	2000	2500	2500	3000	3000	3500	2280	4530	6-12	3280	3385	3400	3630	3735	3750	4200	4235	4350
VM375	2000	2000	2500	2500	3000	3000	3750	2405	4780	6-6 *6-12	3300	3405	3420	3650	3755	3770	4220	4255	4370
VM400	2000	2000	2500	2500	3000	3000	4000	2580	5030	6-6 *6-12	3355	3460	3475	3705	3810	3825	4280	4315	4430
VM425	1950 *2000	1950 *2000	2450 *2500	2450 *2500	2900 *3000	3000	4250	2705	5280	6-6 *6-12	3375	3480	3495	3725	3830	3845	4300	4335	4450
VM450	1900 *1950	1900 *1950	2150 *2450	2350 *2450	2800 *3000	3000	4500	2830	5530	6-6 *6-12	3395	3500	3515	3745	3850	3865	4320	4355	4470
VM475	1800 *1850	1800 *1850	1850 *2350	2200 *2350	2750 *2900	2900	4750	2955	5780	6-6 *6-6	3415	3520	3535	3765	3870	3885	4340	4375	4490
VM500	1650 *1700	1700	1700 *2250	2000 *2250	2700 *2850	2850	5000	3080	6030	6-6 *6-6	3435	3540	3555	3785	3890	3905	4365	4400	4515
VM550	*1500	*1500	*1700	*1700	*2400	*2400	5500	3380	6530	*3-6	3510	3615	3630	3860	3965	3980	4440	4475	4590
VM600	*1300	*1300	*1400	*1400	*2000	*2000	6000	3630	7030	*3-6	3550	3655	3670	3900	4005	4020	4480	4515	4630

NOTE : (1) Figures for [2t, 2.5t model] . For [3t model] +45mm

Wide View Full Free 2-Stage Mast VFM

Mast Model	Rated Capacity 500mm load center(kg)						Max. Fork Height	Overall Mast Height			(3)Free lift with Backrest	Tilting Angle F/B	(4) Service Weight(kg)								
	FD20T3K		FD25T3K		FD30T3K			(1) Lowered	(2)Raised with Backrest				FD20T3K			FD25T3K			FD30T3K		
	PNEUMATIC	UNIQUE(SE)	PNEUMATIC	UNIQUE(SE)	PNEUMATIC	UNIQUE(SE)							mm	mm	mm	mm	deg	S	DD	SDD	S
VFM250	2000	2000	2500	2500	3000	3000	2500	1780	3530	780	6-10	3255	3360	3375	3605	3710	3725	4160	4195	4310	
VFM270	2000	2000	2500	2500	3000	3000	2700	1880	3730	880	6-10	3275	3380	3395	3625	3730	3745	4175	4210	4325	
VFM300	2000	2000	2500	2500	3000	3000	3000	2030	4030	1030	6-12	3300	3405	3420	3650	3755	3770	4205	4240	4355	
VFM330	2000	2000	2500	2500	3000	3000	3300	2180	4330	1180	6-12	3325	3430	3445	3675	3780	3795	4230	4265	4380	
VFM350	2000	2000	2500	2500	3000	3000	3500	2280	4530	1280	6-12	3340	3445	3460	3690	3795	3810	4245	4280	4395	
VFM375	2000	2000	2500	2500	3000	3000	3750	2405	4780	1405	6-6 *6-12	3360	3465	3480	3710	3815	3830	4270	4305	4420	
VFM400	2000	2000	2500	2500	3000	3000	4000	2580	5030	1580	6-6 *6-12	3420	3525	3540	3770	3875	3890	4335	4370	4485	
VFM425	1950 *2000	1950 *2000	2450 *2500	2450 *2500	2900 *3000	3000	4250	2705	5280	1705	6-6 *6-12	3440	3545	3560	3790	3895	3910	4355	4390	4505	
VFM450	1900 *1950	1900 *1950	2150 *2450	2350 *2450	2800 *3000	3000	4500	2830	5530	1830	6-6 *6-12	3465	3570	3585	3815	3920	3935	4375	4410	4525	
VFM475	1800 *1850	1800 *1850	1850 *2350	1850 *2350	2250 *2900	2900	4750	2955	5780	1955	6-6 *6-6	3485	3590	3605	3835	3940	3955	4400	4435	4550	
VFM500	1650 *1700	1700	1700 *2250	1700 *2250	2000 *2850	2850	5000	3080	6030	2080	6-6 *6-6	3505	3610	3625	3855	3960	4080	4420	4455	4570	

NOTE : (1) Figures for [2t, 2.5t model] . For [3t model] +45mm

(2) Figures for [2t, 2.5t model] . For [3t model] +230mm

For height without backrest: [2t, 2.5t model] -385mm, [3t model] -520mm

(3) Figures for [2t, 2.5t model] . For [3t model] -180mm

For free lift without backrest: [2t, 2.5t model] +385mm, [3t model] +520mm

(4) Weight for without backrest: [2t, 2.5t model] -20kg, [3t model] -30kg

Wide View Full Free 3-Stage Mast VFHM

Mast Model	Rated Capacity 500mm load center(kg)						Max. Fork Height	Overall Mast Height		(3)Free lift with Backrest	Tilting Angle F/B	(4) Service Weight(kg)								
	FD20T3K		FD25T3K		FD30T3K			(1) Lowered	(2)Raised with Backrest			FD20T3K			FD25T3K			FD30T3K		
	PNEUMATIC	UNIQUE(SE)	PNEUMATIC	UNIQUE(SE)	PNEUMATIC	UNIQUE(SE)						S	DD	SDD	S	DD	SDD	S	DD	SDD
VFHM360	2000	2000	2500	2500	3000	3000	3600	1780	4630	780	6-6 *6-10	3395	3500	3515	3745	3850	3865	4305	4340	4455
VFHM400	2000	2000	2500	2500	3000	3000	4000	1905	5030	905	6-6 *6-10	3425	3530	3545	3775	3880	3895	4335	4370	4485
VFHM435	1900 *2000	1900 *2000	2200 *2400	2300 *2400	2900 *3000	2900 *3000	4350	2030	5380	1030	6-6 *6-10	3455	3560	3575	3805	3910	3925	4370	4405	4520
VFHM480	1700 *1900	1800 *1900	1900 *2300	2200 *2300	2800 *2900	2800 *2900	4800	2180	5830	1180	6-6 *6-10	3485	3590	3605	3835	3940	3955	4405	4440	4555
VFHM500	1500 *1800	1750 *1800	1600 *2250	2000 *2250	2600 *2750	2750	5000	2280	6030	1280	6-6 *6-10	3510	3615	3630	3860	3965	3980	4430	4465	4580
VFHM540	1200 *1750	1650 *1750	1300 *2150	1700 *2150	1900 *2650	2500 *2650	5400	2405	6430	1405	3-6 *3-6	3540	3645	3660	3890	3995	4010	4465	4500	4615
VFHM600	900 *1650	1100 *1650	950 *1800	1100 *1800	1400 *2100	1850 *2100	6000	2630	7030	1630	3-6 *3-6	3635	3740	3755	3985	4090	4105	4560	4595	4710

NOTE : (1) Figures for [2t, 2.5t model] . For [3t model] +45mm

(2) Figures for [2t, 2.5t model] . For [3t model] +230mm

For height without backrest: [2t, 2.5t model] -455mm, [3t model] -580mm

(3) Figures for [2t, 2.5t model] . For [3t model] -180mm

For free lift without backrest: [2t, 2.5t model] +455mm, [3t model] +580mm

(4) Weight for without backrest: [2t, 2.5t model] -20kg, [3t model] -30kg

NOTE :

Rated capacity with (*) : Shows capacity with DD: front dual tires.

Service weight of VM550-600 represents the weight of vehicles equipped with "SDD:special dual tires".

Lifting speed with VFM/VFHM mast: with VFM [2t, 2.5t model] 480mm/s with load. 530mm/s without load.

[3t model] 410mm/s with load. 440mm/s without load.

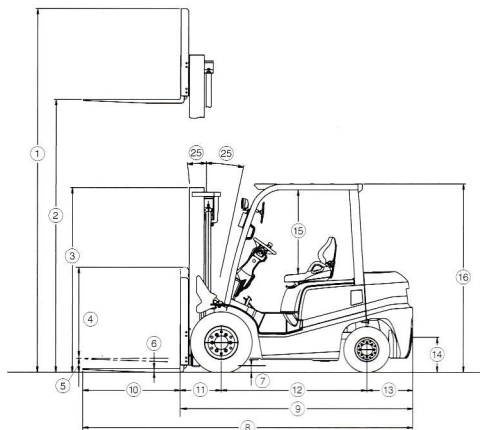
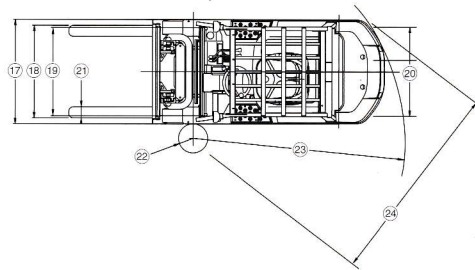
with VFHM [2t, 2.5t model] 500mm/s with load. 550mm/s without load.

[3t model] 420mm/s with load. 460mm/s without load.

Lowering speed with VFM/VFHM mast: 400mm/s with load. 350mm/s without load.

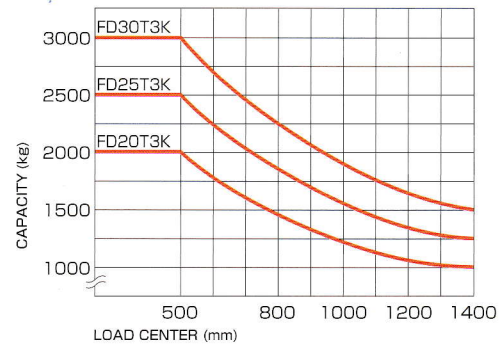
Overall vehicle length with VFHM mast: +15mm longer than of standard model with VM/VFM mast.





GROUND CLEARANCE	FD20T3K	FD25T3K	FD30T3K
	mm	mm	mm
Mast	110	110	140
Frame	120	120	145
Front axle	125	125	145
Rear axle	150	150	175
Counter weight	155	155	185

LOAD CHART 2-3t



STANDARD DIMENSIONS

Model	FD20T3K	FD25T3K	FD30T3K
	mm	mm	mm
① Overall height, fork raised(with backrest)	4030	4030	4250
② Maximum fork height	3000	3000	3000
③ Mast height, fork lowered	2030	2030	2075
④ Backrest height	1000	1000	1220
⑤ Free lift	110	110	165
⑥ Fork thickness	40	40	45
⑦ Minimum ground clearance	110	110	140
⑧ Overall length(with forks)	3555	3625	3775
⑨ Overall length(without forks)	2485	2555	2705
⑩ Fork length	1070	1070	1070
⑪ Load distance	450	450	480
⑫ Wheelbase	1600	1600	1700
⑬ Rear overhang	435	505	525
⑭ Drawbar pin center height	530	530	560
⑮ Overhead guard clearance(from face of seat)	1000	1000	1000
⑯ Overall height(overhead guard)	2070	2070	2090
⑰ Overall width	1150	1150	1225
⑱ Fork spread(outside)	245-1020	245-1020	250-1090
⑲ Tread (front)	970	970	1000
⑳ Tread (rear)	970	970	970
㉑ Fork width	122	122	125
㉒ Inside turning radius	160	160	200
㉓ Outside turning radius	2170	2240	2400
㉔ Minimum intersecting aisle	2210	2230	2330
㉕ Tilt angles(forward-backward)	6-12 deg.	6-12 deg.	6-12 deg.

DIMENSIONS WITH FRONT DUAL DRIVE WHEELS(option)

Model	FD20T3K	FD25T3K	FD30T3K
Tire size (front dual Type: DD)	4 × 5.50-15-8PR(I)		4 × 6.00-15-10PR(I)
	mm	mm	mm
⑰ Overall width	1480	1480	1520
⑲ Tread (front)	1130	1130	1170
㉒ Inside turning radius	100	100	100
㉓ Outside turning radius	2240	2310	2430
㉔ Minimum intersecting aisle	2320	2340	2445

Tire size (front dual Type: SDD)	4 × 7.00-12-12PR(I)		4 × 28 × 9 - 15-12PR(I)
	mm	mm	mm
⑰ Overall width	1590	1590	1750
⑲ Tread (front)	1190	1190	1260
㉒ Inside turning radius	100	100	100
㉓ Outside turning radius	2280	2350	2500
㉔ Minimum intersecting aisle	2370	2380	2490



- TCM retains the right to change these products and specifications without incurring any obligation relating to such changes.
- 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.



ISO 9001 Certification
(TCM Shiga plant)



ISO 14001 Certification
(TCM Shiga plant)

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TCM

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