

# Heavy-Duty Forklift Trucks

## 10-16 ton

**FD100-3HEX FD115-3EX FD120-3EX**  
**FD135-3EX FD150S-3EX FD160S-3EX**

### Class top powerful Model

Installed 4HK1, 5.2liter - 4cyl, watercooled diesel engine with well-approved, specially engineered TCM automatic 3speed power-shift transmission.

### Environment-Friendly clean emission

Compliant with the latest EU, EPA and Japan's emission regulations. yet, New 4HK1 engine equipped with turbocharger and intercooler outputs high torque back-up at various engine speed range.

### Safe operation with Comfort

Designed for full safety with comfort operation, provided ergonomics suspension seat is standard configuration. In compliant with ISO/DIS 3691, Travel interlock system has been provided as standard configuration.

### Productive

New 10-16ton model, engineered for heavy load operations with higher work efficiency, such as metal works, container handling, and other general purposes.

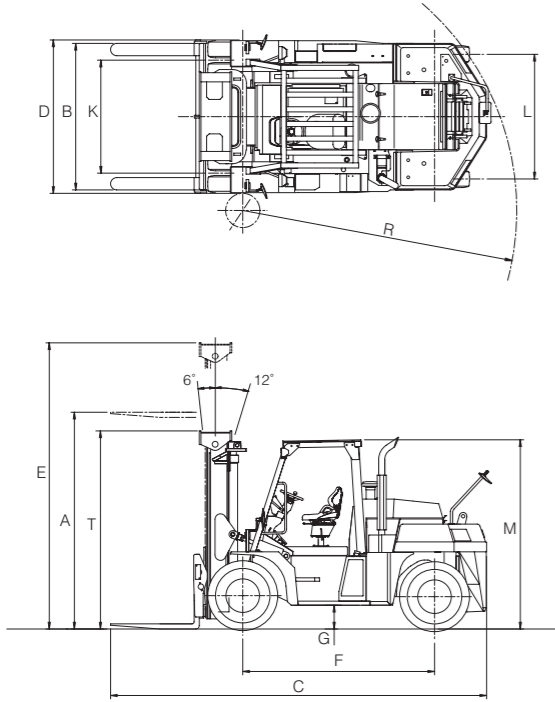


**STANDARD SPECIFICATIONS**

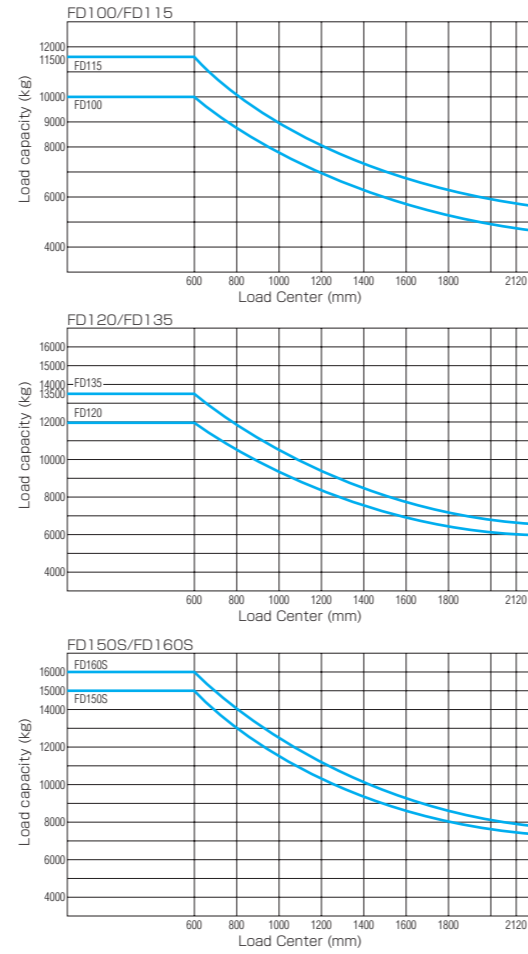
				TCM		TCM		TCM		TCM		TCM		TCM	
				FD100-3HEX		FD115-3EX		FD120-3EX		FD135-3EX		FD150S-3EX		FD160S-3EX	
Characteristics	1	Manufacturer													
	2	Model													
	3	Load Capacity		kg	10000	11500	12000	13500	15000	16000					
	4	Load Center		mm	600	600	600	600	600	600					
	5	Power Type			Diesel	Diesel	Diesel	Diesel	Diesel	Diesel					
	6	Operator Position			Seated	Seated	Seated	Seated	Seated	Seated					
	7	Tire Type	Front / Rear			Pneumatic	Pneumatic	Pneumatic	Pneumatic	Pneumatic					
	8	Wheels(x=driven)	Front / Rear			2X / 2	2X / 2	2X / 2	2X / 2	2X / 2					
Dimensions	9	Maximum Fork Height		A	mm	3000	3000	3000	3000	3000					
	10	Free Lift			mm	0	0	0	0	0					
	12	Overall length: with forks		C	mm	5490	5505	5505	5775	5775					
	13	Fork Size	L x W x T		mm	1220 x 180 x 75	1220 x 180 x 90	1220 x 180 x 90	1220 x 200 x 85	1220 x 200 x 85					
		Fork Spread (Outside)	Max. / Min.		B	mm	2140 / 400	2140 / 400	2140 / 400	2210 / 470	2210 / 470				
	14	Tilt Angle	Fwd. / Bwd.		deg	6 / 12	6 / 12	6 / 12	6 / 12	6 / 12					
	15	Length to Fork Face			mm	4270	4285	4285	4555	4555					
	16	Overall Width		D	mm	2240	2280	2280	2360	2360					
	17	Mast Lowered Height		T	mm	2895	2915	2915	3150	3150					
	18	Mast Extended Height		E	mm	4395	4415	4415	4650	4650					
	19	Cabin Height			mm	—	—	—	—	—					
		Overhead Guard Height		M	mm	2770	2785	2785	2800	2800					
	20	Operator's Seat Height			mm	1675	1690	1690	1705	1705					
	21	Turning Radius (Outside)		R	mm	4000	4000	4000	4300	4300					
	22	Load Distance(Centerline of front axle to front face of forks)			mm	710	725	725	765	765					
	Rear Overhang			mm	760	760	760	690	690						
23	Intersecting Aisle			mm	3370	3370	3370	3550	3550						
Performance	24	Speeds	Travel speed (Fwd. / Rvs.)	1st	km/h	7	7	7	7	7	7	7	7	7	7
				2nd	km/h	16	16	17	17	17	17	17	17	17	17
				3rd	km/h	33	33	34	34	34	34	33	33	33	33
				4th	km/h	—	—	—	—	—	—	—	—	—	—
	25	Lifting	Full Load	mm/sec	420	420	420	420	320	320	320	320	320		
			No Load	mm/sec	470	470	470	470	365	365	365	365			
	26	Lowering	Full Load	mm/sec	400~600	400~600	400~600	400~600	400~600	400~600	400~600	400~600	400~600		
			No Load	mm/sec	400~600	400~600	400~600	400~600	400~600	400~600	400~600	400~600	400~600		
28	Max. Drawbar Pull	Full Load	kN	111	105	105	105	102	102	102	104				
		No Load	kN	46	47	47	47	55	56	54					
30	Max. Gradeability*	Full Load	%	44	37	36	36	31	28	28					
		No Load	%	24	23	22	22	24	24	22					
Weight	32		Total Weight	kg	13520	14640	14950	16130	17030	17380					
	33	Weight Distribution	Full Load	Front	kg	21060	23440	24220	27030	29360	30520				
			Rear	kg	2460	2700	2730	2600	2670	2860					
	34	No Load	Front	kg	6360	6480	6520	7590	7750	7430					
Rear			kg	7160	8160	8430	8540	9280	9950						
Chassis & Wheels	35	Tires	Number	Front / Rear		4 / 2	4 / 2	4 / 2	4 / 2	4 / 2	4 / 2				
			Size	Front		9.00-20-14PR(ID)	10.00-20-16PR(ID)	10.00-20-16PR(ID)	11.00-20-16PR(ID)	11.00-20-16PR(ID)	11.00-20-18PR(ID)				
			Rear		9.00-20-14PR(ID)	10.00-20-16PR(ID)	10.00-20-16PR(ID)	11.00-20-16PR(ID)	11.00-20-16PR(ID)	11.00-20-18PR(ID)					
	38	Wheelbase		F	mm	2800	2800	2800	3100	3100	3100				
	39	Tread	Front	K	mm	1650	1655	1655	1695	1695	1695				
			Rear	L	mm	1820	1810	1810	1795	1795	1795				
	Overhead Clearance			mm	1060	1060	1060	1060	1060	1060					
	Hood Height			mm	1905	1920	1920	1935	1935	1935					
Drawbar Height			mm	510	530	525	540	540	540						
Step Height / Floor Height			mm	—	—	—	—	—	—						
40	Under-clearance	Min. with Load		mm	250	270	270	250	250	250					
41		Center of Wheelbase		G	mm	265	280	280	295	295					
42	Brake	Service (Foot)			Hydraulic, internal expansion	Hydraulic, internal expansion	Hydraulic, internal expansion	Hydraulic, internal expansion	Hydraulic, internal expansion	Hydraulic, internal expansion					
43		Parking			Built in mission - wet disc	Built in mission - wet disc	Built in mission - wet disc	Built in mission - wet disc	Built in mission - wet disc	Built in mission - wet disc					
45	Battery	Voltage / Capacity(5HR)		V / AH	2 x12 / 80	2 x12 / 80	2 x12 / 80	2 x12 / 80	2 x12 / 80	2 x12 / 80					
Engine & Transmission	49	Internal Combustion Engine	Make / Model			ISUZU 4HK1 with turbo-charger / inter-cooler	ISUZU 4HK1 with turbo-charger / inter-cooler	ISUZU 4HK1 with turbo-charger / inter-cooler	ISUZU 4HK1 with turbo-charger / inter-cooler	ISUZU 4HK1 with turbo-charger / inter-cooler	ISUZU 4HK1 with turbo-charger / inter-cooler				
			Rated Horsepower / r.p.m.		kW	125 / 2000 (net)	125 / 2000 (net)	125 / 2000 (net)	125 / 2000 (net)	125 / 2000 (net)	125 / 2000 (net)				
			Maximum Torque / r.p.m.		N-m	662 / 1500 (net)	662 / 1500 (net)	662 / 1500 (net)	662 / 1500 (net)	662 / 1500 (net)	662 / 1500 (net)				
			Number of Cylinder			4	4	4	4	4	4				
			Piston Displacement		cc	5193	5193	5193	5193	5193	5193				
			Fuel Tank Capacity		liter	250	250	250	250	250	250				
55	Transmission	Type			Power-shift	Power-shift	Power-shift	Power-shift	Power-shift	Power-shift					
		Stage	Fwd. / Rvs.		3 - 3	3 - 3	3 - 3	3 - 3	3 - 3	3 - 3					
57	Operating Pressure	For Attachments		MPa (psi)	20.6	20.6	20.6	20.6	20.6	20.6					

NOTE : \* Computed values.

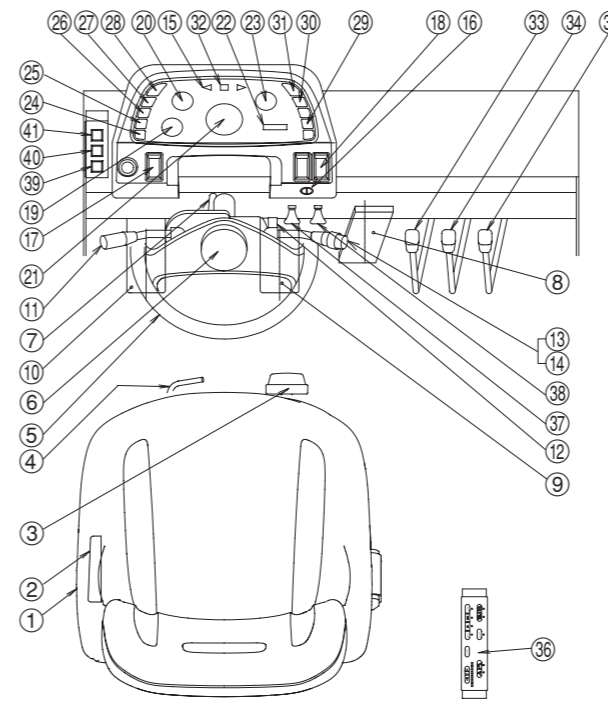
## STANDARD DIMENSIONS



## LOAD CHART



## INSTRUMENTS & CONTROLS



① Operator's seat	⑳ Hour meter
② Seat reclining control lever	㉑ Transmission oil temperature gauge
③ Seat suspension adjustment knob	㉒ Air cleaner warning light
④ Seat position adjustment lever	㉓ Parking brake warning light
⑤ Steering wheel	㉔ Charge warning light
⑥ Horn button	㉕ Brake oil pressure warning light
⑦ Steering column tilt lever	㉖ Engine oil pressure warning light
⑧ Accelerator pedal	㉗ Brake oil level warning light
⑨ Brake pedal	㉘ Neutral indicating light
⑩ Brake pedal	㉙ Working light indicator (option)
⑪ Shift lever	㉚ Hi-beam indicator
⑫ Shift hold selection switch	㉛ Lift lever
⑬ Combination lever switch (lighting switch)	㉜ Tilt lever
⑭ Combination lever switch (turn signal switch)	㉝ Attachment lever (option)
⑮ Turn signal indicator	㉞ Air conditioner switch panel
⑯ Starter switch	㉟ Front windshield wiper switch (option)
⑰ Automatic transmission mode selector switch	㊱ Rear windshield wiper switch (option)
⑱ Parking brake switch	㊲ Traveling interlock system warning light
⑲ Fuel gauge	㊳ Engine check warning indicator
㉑ Cooling water temperature gauge	㊴ Glow indicator light
㉒ Speedometer	

## WIDE VIEW MAST

Mast Model	Capacity			Overall Mast Height (lowered)			Max. Fork Height	Overall Mast Height (raised)			Service Weight		
	Load center 1220mm			FD100	FD115	FD120		FD100	FD115	FD120	FD100	FD115	FD120
	kg	kg	kg										
VM300	10000	11500	12000	2895	2915	2915	3000	4395	4415	4415	13520	14640	14950
VM350	10000	11500	12000	3145	3165	3165	3500	4895	4915	4915	13620	14740	15050
VM400	10000	11500	12000	3395	3415	3415	4000	5395	5415	5415	13720	14840	15150
VM450	10000	11500	12000	3645	3665	3665	4500	5895	5915	5915	13970	15090	15400
VM500	10000	11500	12000	3895	3915	3915	5000	6395	6415	6415	14070	15190	15500
VM550	9000	10350	10800	4145	4165	4165	5500	6895	6915	6915	14170	15290	15600
VM600	8000	9200	9600	4395	4415	4415	6000	7395	7415	7415	14270	15390	15700

Mast Model	Capacity			Overall Mast Height (lowered)			Tilt Angle	Overall Mast Height (raised)			Service Weight			
	Load center 1220mm			FD135	FD150S	FD160S		Fwd / Bwd	FD135	FD150S	FD160S	FD135	FD150S	FD160S
	kg	kg	kg											
VM300	13500	15000	16000	3150	3150	3150	6 / 12	4650	4650	4650	16120	17030	17380	
VM350	13500	15000	16000	3400	3400	3400	6 / 12	5150	5150	5150	16240	17150	17500	
VM400	13500	15000	16000	3650	3650	3650	6 / 12	5650	5650	5650	16490	17400	17750	
VM450	13500	15000	16000	3900	3900	3900	6 / 12	6150	6150	6150	16635	17545	17895	
VM500	13500	15000	16000	4150	4150	4150	6 / 12	6650	6650	6650	16755	17665	18015	
VM550	12150	13500	14400	4400	4400	4400	6 / 12	7150	7150	7150	16875	17785	18135	
VM600	10800	12000	12800	4650	4650	4650	6 / 12	7650	7650	7650	16995	17905	18255	

## STANDARD EQUIPMENT & ACCESSORIES

### Equipment

- Automatic 3-speed powershift transmission
- Bonnet gas dumper with locking stay
- Cartridge type filters; engine fuel, engine oil, mission oil & hydraulic oil
- Coolant reservoir tank
- Cyclopack type double element air cleaner
- Drawbar device in counter weight
- Electrically-controlled parking brake
- Engine oil dipstick
- Front dual drive wheels
- Full hydrostatic power steering
- Heavy duty pneumatic tires
- Hydraulic internal expansion brake with oil
- Hydraulic oil level view gauge
- Large capacity fuel tank(250 liters)
- Load check valve
- Overhead guard type cab
- Suspension seat
- Tilt adjustable steering column
- Tilt cylinder lock valve
- Transmission oil dipstick
- Travel interlock system
- Wide view 2-stage mast
- 1220 mm length forks

### Accessories

- Buck-up buzzer
- 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
- Side view mirrors
- 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
- Lighting switch
- Speed change hold switch(1st fixed / 2nd fixed / automatic speed shift)
- Starter switch inc. & main switch
- Tilt lever
- Turn signal switch

### 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
- Travel interlock warning light
- Turn signal indicator
- Working light indicator

## OPTIONAL EQUIPMENT & ACCESSORIES

### Equipment

- Alternative fork length
- Alternative mast height
- Fork extension sleeve \*
- Fork positioner(hyd. Cylinder) with side shifter
- Fork positioner(hyd. motor) with side shifter
- Fork positioner(hydraulic cylinder type)
- Fork positioner(hydraulic motor type)
- Fork positioner(manual type)
- Side shifter
- Steel cabin with air-conditioner, delux suspension seat, wide rubber floor mat, room mirror
- Steel cabin with heater & defroster, delux suspension seat, wide rubber floor mat, room mirror
- Working lights(front)
- Working lights(rear)

### Accessories

- Back-up buzzer(high volume)
- Back-up linked working lights
- Pneumatic shapped cushion(SE) tire \*
- Tilt cylinder boots
- Working lights(front):halogen light
- Working lights(rear):halogen light

NOTE : \* Excluded FD160S-3EX

Others on request



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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.

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