

# Heavy-Duty Forklift Trucks

## 6-10ton

**FD60Z8 FD70Z8**  
**FD80Z8 FD100Z8**



# DIESEL POWERED Pneumatic Tire Truck



## POWERFUL

### Biggest and Most Powerful Engine in This Class

High-power & Low-fuel consumption 6.5 liter diesel engine, 6BG1 provides:

Rated Power	
<b>84.6kW (115PS) / 2100r.p.m.</b>	FD80/100
<b>82.4kW (112PS) / 2000r.p.m.</b>	FD60/70

Rated Torque	
<b>416.5 N·m (42.5 kg·m) / 1500 r.p.m.</b>	

### Fastest Acceleration

10 meter accelerating speed (loaded)

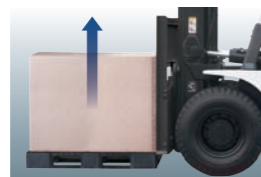
<b>NEW</b>	<b>4.3 sec</b>
<b>PREVIOUS</b>	<b>5.1 sec</b>

## SPEEDY

### Speedy Lifting

One of the highest lift speeds in its class.

**500mm/s** (loaded, FD60)



### Electronic Controlled Automatic Transmission

Automatic transmission provides reliable travel control incorporated with a low effort single electronic control lever.



## FRIENDLY

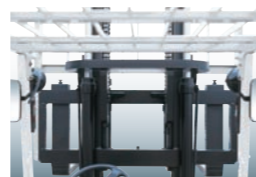
### Environment Friendly Black Smoke Savings of 30% Noxious Substance Savings of 50%

### Low Noise

**85dB(A)**  
(at operators ear, according to ISO)

### Greater Visibility / Super-wide Finger Bar

Excellent forward and upward visibility (top in class) 20% wider than previous model.



## SAFETY

### Boltless Floorboards

Both the front and rear floorboards can be removed or installed easily, without any tools.

### The Parking Brake Lever is Equipped with a Safety Device

### The Mast is as Rigid as Ever.

Durable mast with a thoughtful layout of rollers



## STANDARD SPECIFICATIONS

		UNICARRIERS							
		FD60Z8	FD70Z8	FD80Z8	FD100Z8				
Characteristics	1 Manufacturer								
	2 Model	FD60Z8	FD70Z8	FD80Z8	FD100Z8				
	3 Load Capacity	kg(lbs)	6000(13000)	7000(15500)	8000(17500)	10000(22000)			
	4 Load Center	mm(in)	600(24)						
	5 Power Type		Diesel						
	6 Operator Position		Seated						
	7 Tire Type	Front/Rear	Pneumatic						
	8 Wheels(X=driven)	Front/Rear	4 × /2						
Dimensions	9 Maximum Fork Height	mm(in)	3000(118)						
	10 Free Lift	mm(in)	205(8.1)	215(8.5)	205(8.1)				
	13 Fork Size	L × W × T mm (in)	1220 × 150 × 60 (48.0 × 5.9 × 2.4)	1220 × 150 × 70 (48.0 × 5.9 × 2.8)	1220 × 170 × 75 (48.0 × 6.7 × 3.0)	1220 × 180 × 75 (48.0 × 7.1 × 3.0)			
	14 Tilt Range	Fwd/Bwd deg	6/12						
	15 Length to Fork Face	mm(in)	3535(139.2)	3600(141.7)	3940(155.1)	4255(167.5)			
	16 Overall Width	mm(in)	1995(78.5)		2165(85.2)	2245(88.4)			
	17 Mast Height Fork Lowered	mm(in)	2500(98.4)		2700(106.3)	2850(112.2)			
	18 Mast Height, Fork Raised	mm(in)	4420(174.0)						
	19 Overhead Guard Height ★★★	mm(in)	2450(96.5)		2560(100.8)				
	21 Turning Radius(Outside)	mm(in)	3300(130.0)	3360(132.3)	3650(143.7)	3900(153.5)			
	22 Load Distance (Centerline of Front Axle to Front Face of Forks)	mm(in)	615(24.2)	625(24.6)	720(28.3)	710(28.0)			
	23 Basic Right Angle Stacking Aisle Width	mm(in)	5550(218.5)	5620(221.3)	6015(236.8)	6250(246.1)			
	Performance	24	Travel Max.	Full Load	km/h(mph)	26(16.1)		25(15.5)	24(14.9)
				No Load	km/h(mph)	30(18.6)			
		25	Lifting	Full Load	mm/s(fpm)	500(98.4)	460(90.6)	450(88.6)	390(76.8)
No Load				mm/s(fpm)	550(108.3)		470(92.5)	410(80.7)	
26		Lowering	Full Load	mm/s(fpm)	450(88.6)		470(92.5)		
			No Load	mm/s(fpm)	500(98.4)		450(88.6)	340(66.9)	
28		Max. Drawbar Pull	Full Load / No Load	kN (lbs)	53.9/22.1 (12100/4960)	52.9/21.6 (11900/4850)	57.3/27.4 (12900/6150)	57.3/31.4 (12900/7050)	
29		Gradeability at (1.6km/h or 1mph)	Full Load	%(tan θ)	33	29	27	22	
30	Max. Gradeability ★★	Full Load / No Load	%(tan θ)	38/19	33/19	29/19	24/20		
Weight	32	Total Weight	kg(lbs)	8630(19030)	9360(20640)	10980(24210)	12300(27120)		
	33	Weight Distribution	Full Load	Front	kg(lbs)	13040(28750)	14530(32040)	17040(37570)	20100(44320)
				Rear	kg(lbs)	1590(3510)	1830(4040)	1940(4280)	2200(4850)
	34	No Load	Front	kg(lbs)	3810(8400)	3750(8270)	4820(10630)	5420(11950)	
Rear			kg(lbs)	4820(10630)	5610(12370)	6160(13580)	6880(15170)		
Chassis & Wheels	35	Number	Front/Rear	4/2					
	36	Tires	Front	8.25 × 15-14PR		9.00 × 20-14PR			
			Rear	8.25 × 15-14PR		9.00 × 20-14PR			
	37	Size		8.25 × 15-14PR		9.00 × 20-14PR			
	38	Wheelbase	mm(in)	2250(88.6)		2500(98.4)	2800(110.2)		
	39	Tread	Front	mm(in)	1470(57.9)		1600(63.0)		
			Rear	mm(in)	1700(66.9)				
40	Underclearance	at lowest point	mm(in)	190(7.5)		245(9.6)			
		Center of Frame	mm(in)	230(9.1)		335(13.2)			
42	Brake	Service	Hydraulic-Foot pedal						
43		Parking	Mechanical-Hand lever						
45	Battery	Voltage / Capacity	2 × 12V-70AH/20h						
49		Make-Model	ISUZU 6BG1						
Engine & Transmission	50	Internal Combustion Engine	Rated Horspower / r.p.m.	82.4kW/2000r.p.m. : 112PS/2000r.p.m. (SAE GROSS 114HP/2000r.p.m.)		84.6kW/2100r.p.m. : 115PS/2100r.p.m. (SAE GROSS 118HP/2100r.p.m.)			
			Rate Torque / r.p.m	416.5N · m/1500r.p.m. : 42.5kg · m/1500r.p.m. (SAE 307.4ft · lbs/1500r.p.m.)					
	51		Number of Cylinder	6					
	52		Displacement	lit(cu-in)	6.494(396.3)				
			Fuel Tank Capacity Type	lit(US gal)	140(37.0)				
55	Transmission	Number of Speed Fwd / Rvs-Type	2/2-Automatic Power shift						
57	Operating Pressure	For Attachment	kgf / cm <sup>2</sup> (psi)	200(2844)					

★★ Computed values(Travel speed 0km/h) ★★★ In European Export Units +15mm(0.5in)

Wide View Mast

Wide View Mast VM

Mast Model	Rated Capacity/ 600mm(24 in) Load Center				Max. Fork Height		Overall Mast Height				Tilting Angle Fwd-Bkd deg	Service Weight			
	FD60Z8		FD70Z8				Lowered		Raised with Backrest			FD60Z8		FD70Z8	
	kg	lbs	kg	lbs	mm	in	mm	in	mm	in		mm	in	kg	lbs
VM300	6000	13000	7000	15500	3000	118.0	2500	98.4	4420	174.0	6-12	8630	19030	9360	20640
VM330	6000	13000	7000	15500	3300	130.0	2650	104.4	4720	185.8	6-12	8680	19140	9410	20750
VM350	6000	13000	7000	15500	3500	137.8	2750	108.3	4920	193.7	6-12	8710	19210	9440	20820
VM400	6000	13000	7000	15500	4000	157.5	3050	120.1	5420	213.4	6-12	8900	19620	9630	21230
VM450	6000	13000	7000	15500	4500	177.2	3300	130.0	5920	233.1	6-12	8990	19820	9720	21430
VM500	6000	13000	7000	15500	5000	196.9	3550	139.8	6420	252.8	6-6	9100	20070	9830	21680
VM550	5700	12500	6600	14500	5500	216.5	3850	151.6	6920	272.4	3-6	9300	20510	10030	22120
VM600	5400	11900	6400	14100	6000	236.2	4100	161.4	7420	292.1	3-6	9380	20680	10110	22290

Wide View Full Free 2-Stage Mast VFM

Mast Model	Rated Capacity/ 600mm(24 in) Load Center				Max. Fork Height		Overall Mast Height				(2)Free Lift with Backrest		Tilting Angle Fwd-Bkd deg	(3)Service Weight					
	FD60Z8		FD70Z8				Lowered		(1)Raised with Backrest		FD60Z8			FD70Z8		FD60Z8		FD70Z8	
	kg	lbs	kg	lbs	mm	in	mm	in	mm	in	mm	in		mm	in	mm	in	kg	lbs
VFM300	6000	13000	7000	15500	3000	118.0	2625	103.4	4420	174.0	1255	49.4	1265	49.8	6-12	8755	19310	9465	20880
VFM330	6000	13000	7000	15500	3300	130.0	2775	109.3	4720	185.8	1405	55.3	1415	55.7	6-12	8805	19420	9515	20990
VFM350	6000	13000	7000	15500	3500	137.8	2875	113.2	4920	193.7	1505	59.3	1515	59.6	6-12	8835	19490	9545	21050
VFM400	6000	13000	7000	15500	4000	157.5	3175	125.0	5420	213.4	1805	71.1	1815	71.5	6-12	9035	19930	9745	21490
VFM450	6000	13000	7000	15500	4500	177.2	3425	134.9	5920	233.1	2055	80.9	2065	81.3	6-12	9115	20100	9825	21670

NOTE: (1)For height without backrest: -325mm(-12.8in)  
(2)For free lift without backrest: +325mm(+12.8in)  
(3)Weight for without backrest: [FD60] -54kg(-120lbs), [FD70] -59kg(-130lbs)

Wide View Full Free 3-Stage Mast VFHM

Mast Model	Rated Capacity/ 600mm(24 in) Load Center				Max. Fork Height		Overall Mast Height				(2)Free Lift with Backrest		Tilting Angle Fwd-Bkd deg	(3)Service Weight					
	FD60Z8		FD70Z8				Lowered		(1)Raised with Backrest		FD60Z8			FD70Z8		FD60Z8		FD70Z8	
	kg	lbs	kg	lbs	mm	in	mm	in	mm	in	mm	in		mm	in	mm	in	kg	lbs
VFHM400	5500	12150	6200	13650	4000	157.5	2500	98.4	5400	212.6	1130	44.5	1140	44.9	6-10	9255	20410	9965	21980
VFHM435	5500	12150	6200	13650	4350	171.3	2625	103.3	5750	226.4	1255	49.4	1265	49.8	6-10	9335	20590	10045	22160
VFHM480	5500	12150	6200	13650	4800	189.0	2775	109.3	6200	244.1	1405	55.3	1415	55.7	6-10	9415	20770	10125	22330
VFHM500	5500	12150	6200	13650	5000	196.9	2875	113.2	6400	252.0	1505	59.3	1515	59.6	6-10	9470	20890	10180	22450
VFHM600	5000	11050	5500	12150	6000	236.2	3300	130.0	7400	291.3	1930	76.0	1940	76.4	3-6	9830	21680	10540	23250
VFHM700	3500	7700	3700	8150	7000	275.6	3675	144.7	8400	330.7	2305	90.7	2315	91.1	3-6	10015	22090	10725	23650
VFHM800	2200	4850	2300	5050	8000	315.0	4100	161.4	9400	370.1	2730	107.5	2740	107.9	3-6	10340	22810	11050	24370

NOTE: (1)For height without backrest: -325mm(-12.8in)  
(2)For free lift without backrest: +325mm(+12.8in)  
(3)Weight for without backrest: [FD60] -54kg(-120lbs), [FD70] -59kg(-130lbs)

NOTE: Lifting speed with VFM/VFHM mast: 350mm/s(69fpm) with load,  
380mm/s(75fpm) without load.  
Lowering speed with VFM/VFHM mast: 320mm/s(63fpm) with load,  
250mm/s(49fpm) without load.

Wide View Mast VM

Mast Model	Rated Capacity/ 600mm(24 in) Load Center		Max. Fork Height		Overall Mast Height				Tilting Angle Fwd-Bkd deg	Service Weight	
	FD80Z8				Lowered		Raised with Backrest			FD80Z8	
	kg	lbs	mm	in	mm	in	mm	in		kg	lbs
VM300	8000	17500	3000	118.0	2700	106.3	4420	174.0	6-12	10980	24210
VM330	8000	17500	3300	130.0	2850	112.2	4720	185.8	6-12	11040	24340
VM350	8000	17500	3500	137.8	2950	116.2	4920	193.7	6-12	11080	24430
VM400	8000	17500	4000	157.5	3250	128.0	5420	213.4	6-12	11310	24940
VM450	8000	17500	4500	177.2	3500	137.8	5920	233.1	6-12	11400	25140
VM500	7750	17000	5000	196.9	3750	147.6	6420	252.8	6-6	11500	25360
VM550	7400	16300	5500	216.5	4050	159.5	6920	272.4	3-6	11740	25880
VM600	7000	15400	6000	236.2	4300	169.3	7420	292.1	3-6	11850	26130

Wide View Full Free 2-Stage Mast VFM

Mast Model	Rated Capacity/ 600mm(24 in) Load Center		Max. Fork Height		Overall Mast Height				(2)Free Lift with Backrest		Tilting Angle Fwd-Bkd deg	(3)Service Weight	
	FD80Z8				Lowered		(1)Raised with Backrest		FD80Z8				
	kg	lbs	mm	in	mm	in	mm	in	mm	in		kg	lbs
VFM300	8000	17500	3000	118.0	2700	106.3	4420	174.0	1345	53.0	6-12	10920	24080
VFM330	8000	17500	3300	130.0	2850	112.2	4720	185.8	1495	58.9	6-12	10970	24190
VFM350	8000	17500	3500	137.8	2950	116.1	4920	193.7	1595	62.8	6-12	11000	24260
VFM400	8000	17500	4000	157.5	3250	128.0	5420	213.4	1895	74.6	6-12	11240	24780
VFM450	8000	17500	4500	177.2	3500	137.8	5920	233.1	2145	84.4	6-12	11330	24980

NOTE: (1)For height without backrest: -205mm(-8.1in)  
(2)For free lift without backrest: +205mm(+8.1in)  
(3)Weight for without backrest: -60kg(-130lbs)

Wide View Full Free 3-Stage Mast VFHM

Mast Model	Rated Capacity/ 600mm(24 in) Load Center		Max. Fork Height		Overall Mast Height				(2)Free Lift with Backrest		Tilting Angle Fwd-Bkd deg	(3)Service Weight	
	FD80Z8				Lowered		(1)Raised with Backrest		FD80Z8				
	kg	lbs	mm	in	mm	in	mm	in	mm	in		kg	lbs
VFHM400	7000	15450	4000	157.5	2575	101.4	5400	212.6	1220	48.0	6-10	11580	25530
VFHM435	7000	15450	4350	171.3	2700	106.3	5750	226.4	1345	53.0	6-10	11650	25690
VFHM480	7000	15450	4800	189.0	2850	112.2	6200	244.1	1495	58.9	6-10	11720	25840
VFHM500	7000	15450	5000	196.9	2950	116.1	6400	252.0	1595	62.8	6-10	11790	25990
VFHM600	6000	13250	6000	236.2	3375	132.9	7400	291.3	2020	79.5	3-6	12150	26790
VFHM700	4500	9900	7000	275.6	3750	147.6	8400	330.7	2395	94.3	3-6	12360	27250
VFHM800	2500	5500	8000	315.0	4175	164.4	9400	370.1	2820	111.0	3-6	13110	28900

NOTE: (1)For height without backrest: -205mm(-8.1in)  
(2)For free lift without backrest: +205mm(+8.1in)  
(3)Weight for without backrest: -60kg(-130lbs)

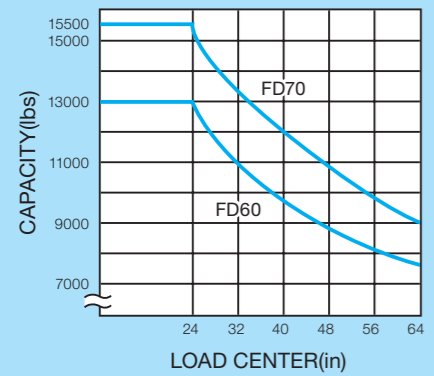
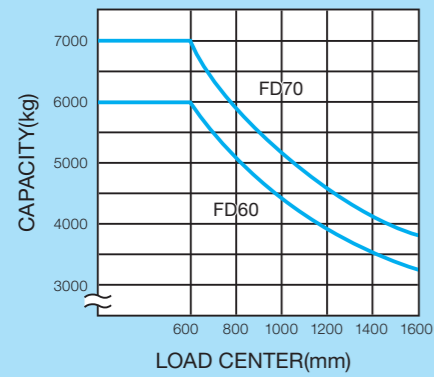
Wide View Mast VM

Mast Model	Rated Capacity/ 600mm(24 in) Load Center		Max. Fork Height		Overall Mast Height				Tilting Angle Fwd-Bkd deg	(3)Service Weight	
	FD100Z8				Lowered		Raised with Backrest			FD100Z8	
	kg	lbs	mm	in	mm	in	mm	in		kg	lbs
VM300	10000	22000	3000	118.0	2850	112.2	4330	170.5	6-12	12300	27060
VM330	10000	22000	3300	129.9	3000	118.0	4630	182.3	6-12	12365	27200
VM350	10000	22000	3500	137.8	3100	122.0	4830	190.2	6-12	12410	27300
VM400	10000	22000	4000	157.5	3400	133.9	5330	209.8	6-12	12660	27850
VM450	10000	22000	4500	177.2	3650	143.7	5830	229.5	6-12	12770	28090
VM500	10000	22000	5000	196.9	3900	153.5	6330	249.2	6-6	12870	28310
VM550	9000	19800	5500	216.5	4200	165.4	6830	268.9	3-6	13120	28860
VM600	8000	17600	6000	236.2	4450	175.2	7330	288.6	3-6	13230	29110

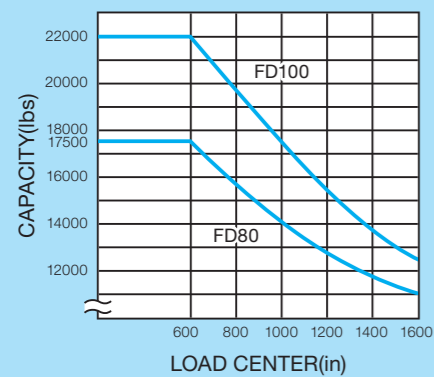
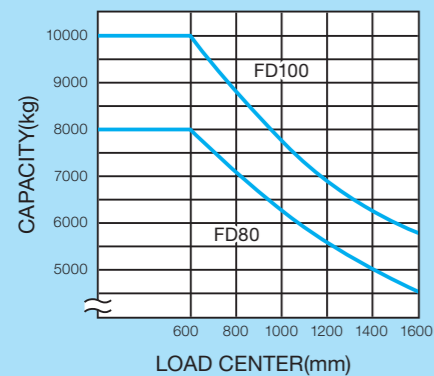
NOTE: Lifting speed with VFM/VFHM mast: [FD80]400mm/s(79fpm) with load,  
420mm/s(83fpm) without load.  
Lowering speed with VFM/VFHM mast: [FD80]350mm/s(69fpm) with load,  
290mm/s(57fpm) without load.

**LOAD CHART**

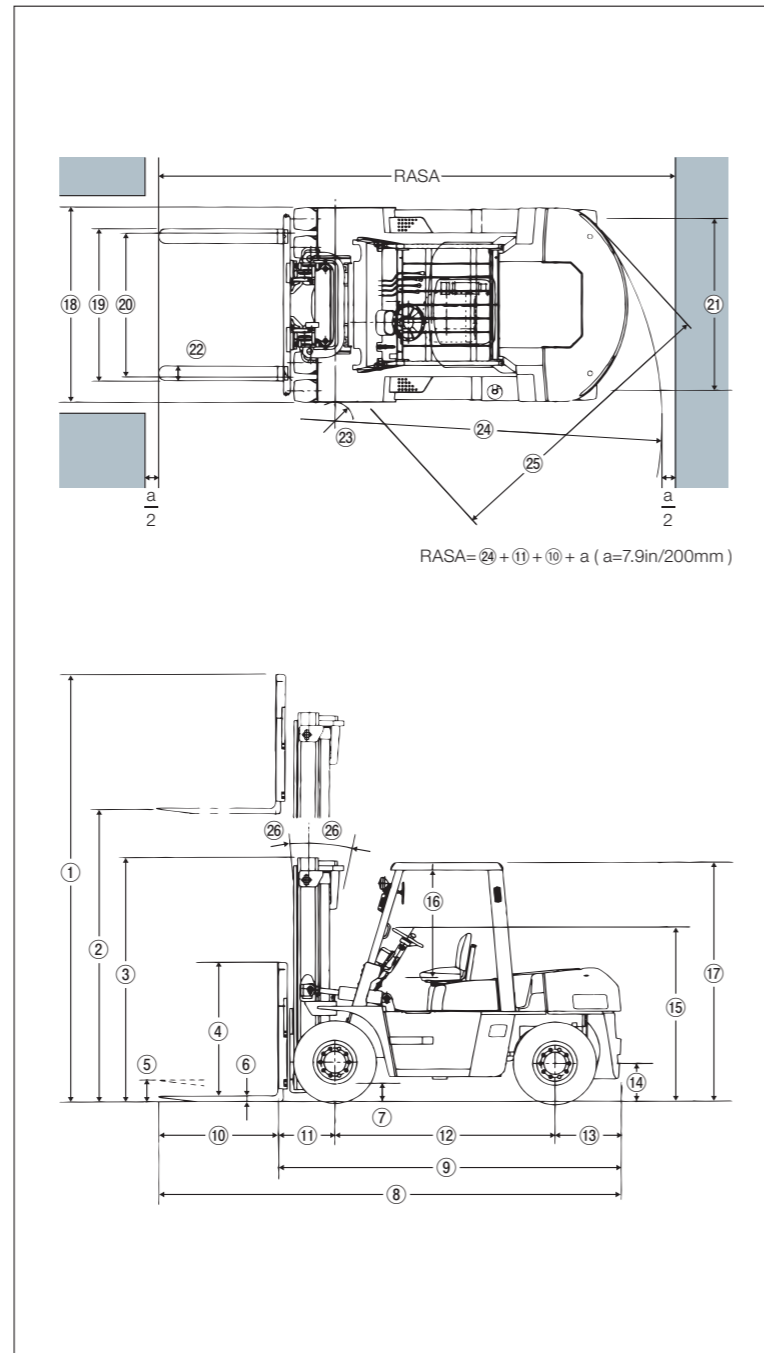
**FD60Z8 • FD70Z8**



**FD80Z8 • FD100Z8**



**STANDARD DIMENSIONS**



GROUND CLEARANCE	FD60Z8	FD70Z8	FD80Z8	FD100Z8
<b>Mast</b>	195(7.7)		245(9.6)	
<b>Frame</b>	230(9.1)		335(13.2)	
<b>Front axle</b>	190(7.5)		265(10.4)	
<b>Rear axle</b>	245(9.7)		325(12.8)	315(12.4)
<b>Counter weight</b>	225(8.9)		310(12.2)	

mm(in)

Model	FD60Z8		FD70Z8		FD80Z8		FD100Z8	
	mm	in	mm	in	mm	in	mm	in
① Overall height, Fork Raised(with backrest)	4420	174.0	4420	174.0	4420	174.0	4330	170.5
② Maximum Fork Height	3000	118.0	3000	118.0	3000	118.0	3000	118.0
③ Mast height, Fork lowered(upright)	2500	98.4	2500	98.4	2700	106.3	2850	112.2
④ Backrest height	1370	53.9	1365	53.7	1360	53.5	-	-
⑤ Free lift	205	8.1	215	8.5	205	8.1	205	8.1
⑥ Fork thickness	60	2.4	70	2.8	75	3.0	75	3.0
⑦ Ground clearance(front axle)	190	7.5	190	7.5	265	10.4	265	10.4
⑧ Overall length(with forks)	4760	187.4	4835	190.4	5180	203.9	5470	215.4
⑨ Length to fork face	3535	139.2	3600	141.7	3940	155.1	4255	167.5
⑩ Fork length	1220	48.0	1220	48.0	1220	48.0	1220	48.0
⑪ Load distance (centerline of front axle to front face of forks)	615	24.2	625	24.6	720	28.3	710	28.0
⑫ Wheelbase	2250	88.6	2250	88.6	2500	98.4	2800	110.2
⑬ Rear overhang	675	26.6	740	29.1	740	29.1	740	29.1
⑭ Drawbar Pin Center Height	430	16.9	430	16.9	515	20.3	515	20.3
⑮ Machine height (without overhead guard and mast)	1780	70.1	1780	70.1	1890	74.4	1890	74.4
⑯ Overhead guard clearance (from face of seat) **	1100	43.3	1100	43.3	1100	43.3	1100	43.3
⑰ Overall height(overhead guard) ***	2450	96.5	2450	96.5	2560	100.8	2560	100.8
⑱ Overall width	1995	78.5	1995	78.5	2165	85.2	2245	88.4
⑲ Fork Spread(outside)	300 ~ 1835	11.8 ~ 72.2	300 ~ 1835	11.8 ~ 72.2	340 ~ 2000	13.4 ~ 78.7	405 ~ 2145	15.9 ~ 84.4
⑳ Tread(front)	1470	57.9	1470	57.9	1600	63.0	1600	63.0
㉑ Tread(rear)	1700	66.9	1700	66.9	1700	66.9	1700	66.9
㉒ Fork width	150	5.9	150	5.9	170	6.7	180	7.1
㉓ Inside turning radius	200	7.9	200	7.9	200	7.9	200	7.9
㉔ Outside turning radius	3300	130.0	3360	132.3	3650	143.7	3900	153.5
㉕ Min.intersecting aisle	2980	117.3	3020	118.9	3290	129.5	3540	139.4
㉖ Tilt range(forward-backward)	6° - 12°		6° - 12°		6° - 12°		6° - 12°	

\*\* In European Export Unit + 50mm(2.0in)  
\*\*\* In European Export Unit + 15mm(0.5in)

**STANDARD EQUIPMENTS**

- Automatic shifting T/M
- Back-up buzzer
- Back-up light
- Charging light
- Column shift direction change
- Convertor oil cooler
- Cyclopak air cleaner with dust indicator
- Documents clip
- Drawbar-pin
- Engine oil pressure warning light
- Fuel gauge
- Full wide carriage
- Glow plug indicator
- Head & turn signal lights
- Horn
- Hour meter
- Key switch engine stop
- Load backrest
- Load check valve
- Long life tires
- Neutral safety switch
- Overhead Guard
- Power brake
- Power steering
- Radiator reserve tank
- Rear view mirrors
- Retaining Rollers
- Starter switch
- Suspension seat
- Tilt adjustable handle
- Tool set
- Water temperature gauge
- Wide View Mast

**OPTIONAL EQUIPMENTS & ACCESSORIES**

- Catalytic muffler
- Central greasing
- Cold weather spec.
- Fire extinguisher
- Heater
- Overhead exhaust
- Plate fin radiator
- Port relief valves
- Rear working light
- Right hand direction change
- Solid tires
- Spark arrest muffler
- Speedometer
- Steel Cabin
- Steel net on head guard
- Strober light
- Tilt cylinder boots
- Water separator

**ATTACHMENTS**

- Fork extension sleeves
- Fork positioner
- Hinged Forks
- Load grab
- Long forks
- Ram
- Side shift
- etc.

**NOTES**

- Meets following major standards and code:  
ISO22915-2 Counter Balanced Lift Trucks, Stability & Safety Test(Int'l)  
JIS D6001 Industrial Lift Trucks (Japan)  
ISO D6011 Stability & Safety Test (Japan)
- Overhead guard meets ISO 6055, JIS D6021

And others on request.



- UniCarriers Corporation 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.
- Produced in ISO certified factory.