SHOP MANUAL

FD100/115-6
FD135/150E/160E-6

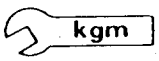
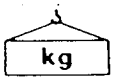
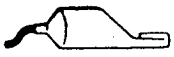
MACHINE MODEL	SERIAL NO.
FD100/115	**5001 and up**
FD135/150E/160E	**5001 and up**

PRECAUTIONS WHEN PERFORMING THE SERVICE WORK

Always pay attention to "Safety" before starting any work — this is important.
Never attempt any work where danger to yourself or to other persons.
Whenever work requiring safety precautions are described in this manual, a flag mark ⚠ inserted, always make double sure that safety measures are taken.
Other unmarked work, should always be performed after studying and using your common sense to prevent accidents.

DESCRIPTION OF THE SYMBOLS

The symbols described below are used in this manual for convenience and better understanding.

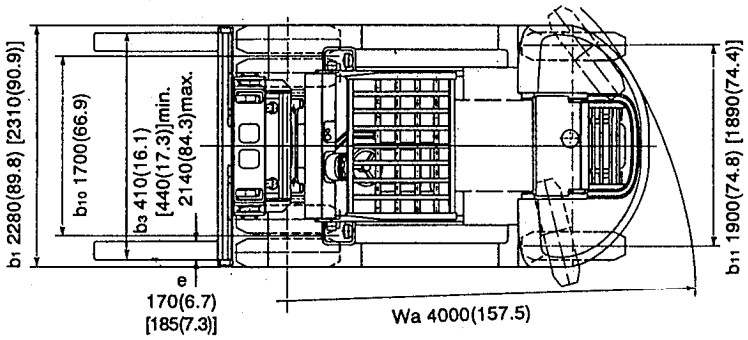
Symbol	Item	Description
	**Safety**	Special safety precautions are needed to perform the work.
	**Note**	Special technical precautions are needed to perform the work.
	**Tightening torque**	Fastening parts that require specified tightening force when assembling.
	**Weight**	Weight of parts or systems
	**Coat**	Places to be coated with adhesives, etc. when assembling

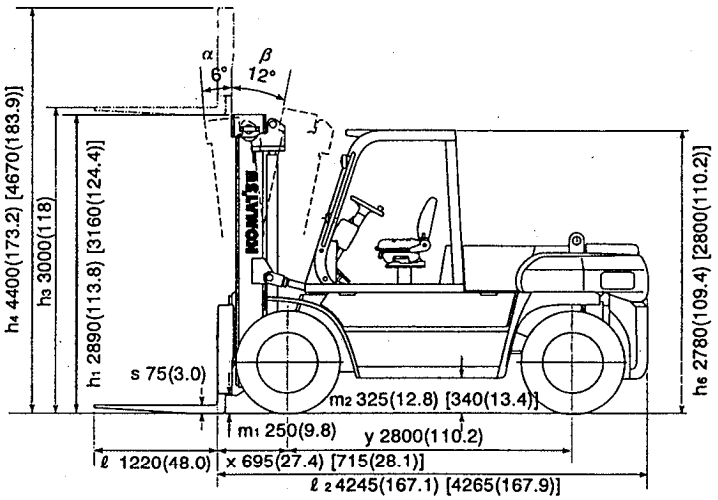
SECTION INDEX

10. GENERAL AND SPECIFICATIONS

SPECIFICATIONS

FD100-6, FD100T-6
FD115-6, FD115T-6

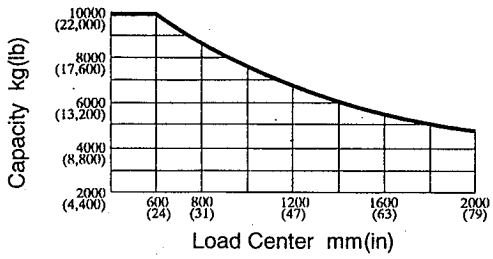




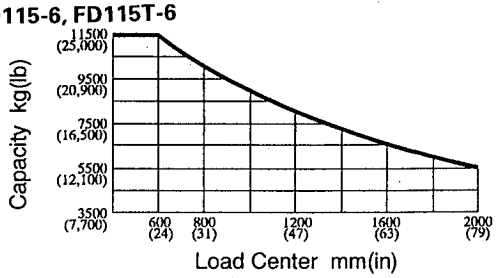
*[ ] : FD115-6, FD115T-6

CAPACITY CHART

FD100-6, FD100T-6



FD115-6, FD115T-6



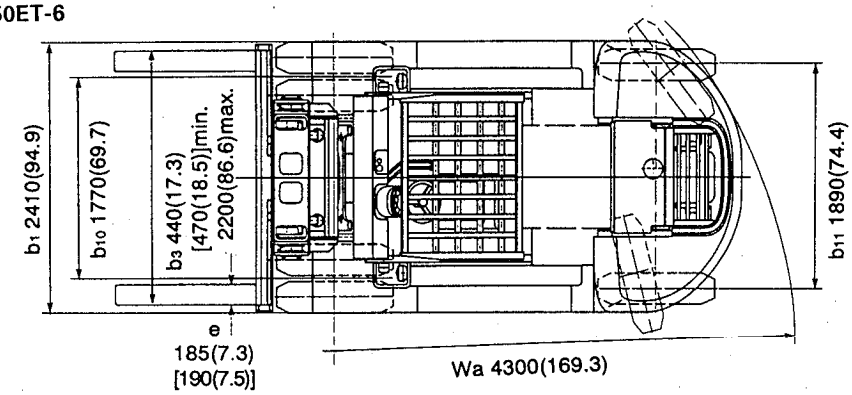
									FD100-6	FD115-6
Characteristics	1.2	Model	Manufacturer's Designation						FD100-6	FD115-6
	1.3	Power type	Electric, Diesel, Gasoline, LPG, Cable						Diesel	Diesel
	1.4	Operation Type	Pedestrian, Driver Standing, Sitting, Order Picking						Sitting	Sitting
	1.5	Rated Capacity	Q	Rated Capacity			kg(lb)		10000(22,000)	11500(25,000)
	1.6	Load Center	c	Rated Load Center			mm(in)		600(24)	600(24)
	1.6.2	Max. Fork Height, Rated Capacity					mm(in)		3000(118)	3000(118)
	1.8	Load distance	x	Front Axle Center to Fork Face			mm(in)		695(27.4)	715(28.1)
	1.9	Wheelbase	y				mm(in)		2800(110.2)	2800(110.2)
Weight	2.1	Service Weight					kg(lb)		12620(27,820)	13950(30,750)
	2.2	Axle Loading		Loaded		Front	kg(lb)		20545(45,290)	23180(51,100)
	2.2.1					Rear	kg(lb)		2075(4,570)	2270(5,000)
	2.3			Unloaded		Front	kg(lb)		5920(13,050)	6280(13,840)
	2.3.1					Rear	kg(lb)		6700(14,770)	7670(16,910)
Tyres	3.1	Tyre Type	Cushion, Elastic Cushion, Pneumatic, Polyurethane						Pneumatic	Pneumatic
	3.2	Tyre Size	Front						9.00-20-14PR(I)	10.00-20-14PR(I)
	3.3		Rear						9.00-20-14PR(I)	10.00-20-14PR(I)
	3.5	Number of Wheel	Front/Rear(x=driven)						4x/2	4x/2
	3.6	Tread, Front	b_{10}				mm(in)		1700(66.9)	1700(66.9)
	3.7	Tread, Rear	b_{11}				mm(in)		1900(74.8)	1890(74.4)
Basic Measurement	4.1	Tilting Angle	α/β				degree		6/12	6/12
	4.2	Mast Height, Lowered	h_1				mm(in)		2890(113.8)	3160(124.4)
	4.3	Std. Free Lift	h_2				mm(in)		0(0.0)	0(0.0)
	4.4	Std. Lift Height	h_3				mm(in)		3000(118)	3000(118)
	4.5	Mast Height, extended	h_4				mm(in)		4400(173.2)	4670(183.9)
	4.7	Height, Overhead Guard	h_6				mm(in)		2780(109.4)	2800(110.2)
	4.19	Length, with Std. Forks	ℓ_1				mm(in)		5465(215.2)	5485(215.9)
	4.20	Length, to Fork Face	ℓ_2				mm(in)		4245(167.1)	4265(167.9)
	4.21	Width, at Tyre	b_1				mm(in)		2280(89.8)	2310(90.9)
	4.22	Forks	s/e/ℓ	Thickness/Width/Length			mm(in)		75x170x1220(3.0x6.7x48.0)	75x185x1220(3.0x7.3x48.0)
	4.23	Fork Carriage Type							Pin mount	Pin mount
	4.24	Width, Fork Carriage	b_3				mm(in)		2140(84.3)	2140(84.3)
	4.31	Ground Clearance	m_1	under Mast			mm(in)		250(9.8)	250(9.8)
	4.32	Ground Clearance	m_2	at center of Wheelbase			mm(in)		325(12.8)	340(13.4)
	4.33	Right Angle Stacking Aisle	Ast	plus load length			mm(in)		4695(184.8)	4715(185.6)
	4.35	Turning Radius	Wa				mm(in)		4000(157.5)	4000(157.5)
	4.36	Distance to Turning Center	b_{13}	from chassis center			mm(in)		1480(58.3)	1480(58.3)
Performance	5.1	Travel speed	loaded,1st/2nd/3rd				km/h(mph)		8.5/18/28(5.3/11.2/17.4)	8.5/19/28(5.3/11.8/17.4)
	5.1.1		unloaded,1st/2nd/3rd				km/h(mph)		9/20/32(5.6/12.4/19.9)	9/21/32(5.6/13.0/19.9)
	5.2	Lifting Speed	loaded/unloaded				mm/s(fpm)		460 /485(91/95)	415 /440(82/87)
	5.3	Lowering Speed	loaded/unloaded				mm/s(fpm)		400/430(49/85)	400/430(79/85)
	5.6	Max. Drawbar Pull	loaded, at 1.5km/h				kN(lb)		112(25,200)	108(24,300)
	5.8	Max. Gradeability	loaded, at 1.5km/h				%		38	32
	5.10	Service Brake	Operation/Control						Foot/Hydraulic, Powered [AIR]	Foot/Hydraulic, Powered [AIR]
	5.11	Parking Brake	Operation/Control						Hand/Mechanical	Hand/Mechanical
	5.12	Steering							Hydraulic Power Steering	Hydraulic Power Steering
I.C. Engine	6.4	Battery	Voltage/Capacity at 5-hour rating				V/Ah		24 /80	24 /80
	7.1	Make/Model							PERKINS/1006TW	PERKINS/1006TW
	7.2	Rated Output SAE gross					kW(HP)		118 (160)	118 (160)
	7.3	Rated RPM					min^{-1}		2200	2200
	7.3.1	Max. Torque SAE gross					Nm(lb-ft)@min^{-1}		588(434)@1400	588(434)@1400
	7.4	No. of Cylinder /Displacement					cm^3(cu.in)		6/5982(365)	6/5982(365)
	7.6	Fuel Tank Capacity					Ltr(US Gal)		220(58)	220(58)
Others	8.2	Relief Pressure for Attachment					bar(psi)		215(3,100)	215(3,100)
	8.2.1	Tank Capacity					Ltr(US Gal)		150(39.6)	150(39.6)
	8.6	Clutch							T/C	T/C
	8.7	Transmission							TORQFLOW	TORQFLOW

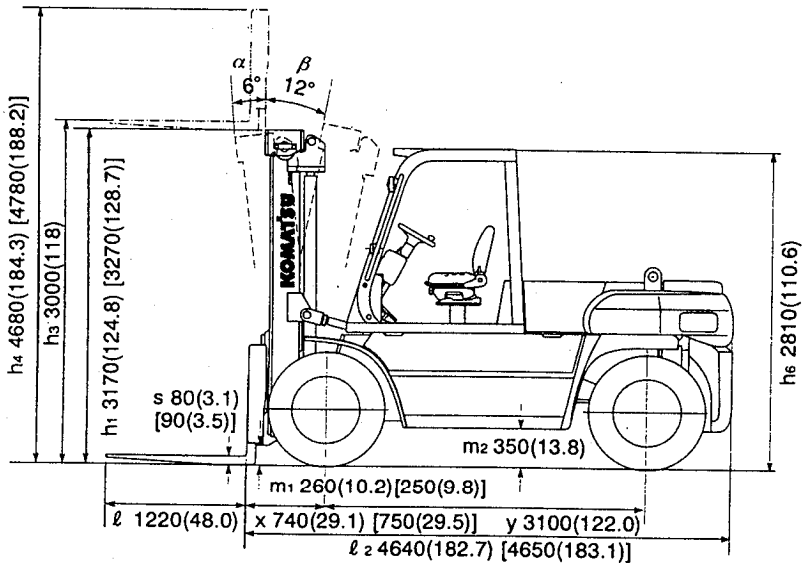
Performance may vary due to operating conditions. The performance shown represents nominal values under typical operating conditions.
Specifications are subject to improvements and changes without notice.

Characteristics	1.2	Model	Manufacturer's Designation					FD100T-6	FD115T-6
	1.3	Power Type	Eletric, Dislel, Gasoline, LPG, Cable					Dislel	Dislel
	1.4	Operation Type	Pedestrain, Drive Standing, Sitting, Order Picking					Sitting	Sitting
	1.5	Rated Capacity	Q	Rated Capacity			kg(lb.)	10000(22000)	11500(25000)
	1.6	Load Center	c	Rated Load Center			mm(in.)	600(24)	600(24)
	1.8	Load Distance	x	Front Axle Center to Fork Face			mm(in.)	695(27.4)	715(28.1)
	1.9	Wheel Base	y				mm(in.)	2800(110.2)	2800(110.2)
Weight	2.1	Service Weight					kg(lb.)	12630(27840)	13960(30780)
	2.2	Axle Loading	Loaded		Front		kg(lb.)	20600(45410)	23195(51140)
	2.2.1				Rear		kg(lb.)	2030(4475)	2265(4990)
	2.3		Unloaded		Front		kg(lb.)	5975(13170)	6295(13880)
	2.3.2				Rear		kg(lb.)	6655(14670)	7665(16900)
Tyres	3.1	Tyre Type	Cushion, Elastic Cushion, Pneumatic, Polyurethane					Pneumatic	Pneumatic
	3.2	Tyre Size	Front					9.00-20-14PR(I)	10.00-20-14PR(I)
	3.3		Rear					9.00-20-14PR(I)	10.00-20-14PR(I)
	3.5	Number of Wheel	Front/Rear (x=driven)					4x/2	4x/2
	3.6	Tread, Front	b10				mm(in.)	1700(66.9)	1700(66.9)
	3.7	Tread, Rear	b11				mm(in.)	1900(74.8)	1890(74.4)
Basic Measurement	4.1	Tilting Angle	α / β	Forward/Backward			degree	6/12	6/12
	4.2	Mast Height, Lowered	h1	2-stage std. Mast			mm(in.)	2890(113.8)	3160(124.4)
	4.3	Std. Free Lift	h2	2-stage std. Mast from Ground			mm(in.)	0	0
	4.4	Std. Lift Height	h3	2-stage std. Mast from Ground			mm(in.)	3000((118)	3000((118)
	4.5	Mast Height, Extended	h4	2-stage std. Mast			mm(in.)	4400(173.2)	4670(183.9)
	4.7	Height, Overhead Guard	h6				mm(in.)	2780(109.4)	2800(110.2)
	4.19	Length, with Std. Forks	l1				mm(in.)	5465(215.2)	5485(215.9)
	4.20	Length, to fork face	l2				mm(in.)	4245(167.1)	4265(167.9)
	4.21	Width, at tyre	b1	Single			mm(in.)	2280(89.8)	2310(90.9)
	4.22	Forks	s/e/l	Thickness/Width/Length			mm(in.)	75x170x1220(3.0x6.7x48.0)	75x185x1220(3.0x7.3x48.0)
	4.23	Fork Carrige Class	ISO 2328, Type A/B/no					Pin Mount	Pin Mount
	4.24	Width, Fork Carriage	b3				mm(in.)	2140(84.3)	2140(84.3)
	4.31	Ground Clearance	m1	Under Mast			mm(in.)	250(9.8)	250(9.8)
	4.32		m2	at center of wheelbase			mm(in.)	325(12.8)	345(13.6)
	4.33	Right Angle Stacking Aisle	Ast	plus load length			mm(in.)	6115(240.7)	6135(241.5)
	4.35	Turning Radius	Wa				mm(in.)	4000(157.5)	4000(157.5)
Performance	5.1	Travel Speed (FWD)	Loaded, 1st/2nd/3rd				km/h(m	8.5/18/28(5.3/11.2/17.4)	8.5/19/28(5.3/11.8/17.4)
	5.1.1		Unloaded, 1st/2nd				km/h(mph)	9/20/32(5.6/12.4/19.9)	9/21/32(5.6/13.0/19.9)
	5.2	Lifting Speed	Loaded/Unloaded				mm/s(fpm)	460/485(91/95)	415/440(82/87)
	5.3	Lowering Speed	Loaded/Unloaded				mm/s(fpm)	400/430(79/85)	400/430(79/85)
	5.6	Max. Drawbar Pull	Loaded				kN(lb)	112(25200)	108(24300)
	5.8	Max. Gradeabilty	Loaded 1.5km/h, 3 min, rating				%	38	32
	5.10	Service Brake	Operation/Control					Foot/Hydraulic, Powered	Foot/Hydraulic, Powered
	5.11	Parking Brake	Operation/Control					Hand/Mechanical	Hand/Mechanical
	5.12	Steering	Type					Hydraulic Power Steering	Hydraulic Power Steering
I.C. Engine	6.4	Battery	Volatge/Capacity at 5-hour rating				V/Ah	24/80	24/80
	7.1	Maker/Model						ISUZU 6BG1T	ISUZU 6BG1T
	7.2	Rated Output, SAE gross					kW(HP)	118(160)	118(160)
	7.3	Rated RPM					min-1	2200	2200
	7.3.1	Max. Torgue, SAE gross					NM(lbft)@min-1	588(434)@1600	588(434)@1600
	7.4	No. of Cylinder/Displacement					cm3(cu.in)	6-6494(396)	6-6494(396)
Others	7.6	Fuel Tank Capacity					Ltr(US gal)	220(58)	220(58)
	8.2	Relief Pressure for Attachment					bar(psi)	215(3100)	215(3100)
	8.2.1	Tank Capacity					Ltr(US gal)	180(47.6)	180(47.6)
	8.6	Clutch						Torque Converter	Torque Converter
	8.7	Transmission						Torqflow	Torqflow

Performance may vary due to operating conditions. The performance shown represents nominal values under typical operating conditions.
Specifications are subject to improvements and changes without notice.

FD135-6, FD135T-6
FD150E-6, FD150ET-6

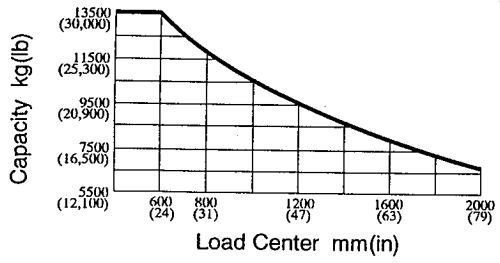




*[ ] : FD150-6, FD150ET-6

CAPACITY CHART

FD135-6, FD135T-6



FD150E-6, FD150ET-6