



# X Series Electric Pneumatic Tire Forklift Truck

with capacities of 4,000 to 7,000lbs

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SINCE 1956



# X Series Electric Pneumatic Tire Forklift Truck

The X series 4,000~7,000lbs forklift trucks are new-generation products by independent research and development based on former products of HANGCHA, with an overall upgrade in appearance molding, performance efficiency, comfort, safety and maintainability.

**Agile/  
Efficient/  
Flexible**



## Appearance

- / Appearance design methods of new concepts, streamlined surface modeling, flexible and smooth lines, elegant and decent.
- / Compact truck shape, simplified appearance, vigorous and powerful.
- / Optimum energy efficiency.

## Stability

- / The traction motors are arranged in parallel, the batteries are fixed at the bottom of the truck frame, and the shaft distance and real-wheel distance have been lengthened, aiming to enhance the swing point of steering axle and shorten front overhang distance for excellent stability.

## Efficiency

- / The inner and outer turning angle of steering wheels are enlarged with small turning radius, which can operate in narrow paths.
- / Multi-speed models for selection to adapt various working conditions.
- / A high-power traction motor and high-speed-ratio gearbox have been adopted. The maximum travelling speed and climbing gradient under full load have been increased to 10.3mile/h and 20% respectively.
- / High-power pump motor with quiet and large discharge capacity has been adopted to promote lifting speed. For instance, the maximum lifting speed with 3300lbs full load can reach 16.5inch/s.
- / Thanks to the stability technologies, such as new mast with shorter load distance, making a great promotion of loading capability and high lifting mast.
- / Compact design, the width of 4,000~5,000lbs truck is only 46.5inch.
- / Light weight and low energy consumption. Brake energy regeneration system effectively saves energy and prolongs operation hours for one charge.

## Comfort

- / Designed based on ergonomics, the longer wheelbase provides larger space for legs. The diameter of steering wheel has been decreased to 11.8inch. Seats can be adjusted forward and backward for operators to choose the best driving position.
- / Humanized design. Storing space, USB interface and others have been added.



New designed mast and the large open steel roof provide super visibility, it also can reduce risk of accidents



Fully closed operation plate space, tilting cylinder and flat bottom plate, providing more comfortable and safe operation



Side roll out the battery can provides the fast, simple and safe solution for the operator



Multi-function instrument with color screen, clear human-computer interaction interface for visualized reading



## Safety

- / LED front lights and combined lights provide better view to operators under any circumstance.
- / The panoramic rearview mirror provides broader rearview for safer driving.
- / Soft landing system: When forks are 3.9~2.4inch above the ground, the descending speed decreases automatically, keeping the goods and pallet from hitting the ground and protecting both goods and the ground effectively.
- / Overload protection device for electronics and hydraulics, conforming to safety specifications.

## Maintenance

- / The bottom plate under feet can be disassembled without tools, which is convenient to check and repair all walking motors and systems.
- / Brake fluid can be added when the shield cover and oiler cover are opened.
- / Fully opening covers are quite convenient for the maintenance motors and controllers.

## Advancement

- / High frequency MOSFET controller provides accurate control of travelling, lifting, and better adjustable performance, and better matches the motor. Regenerative braking, reverse current braking and anti-slide on slope function guarantee the operation safety.
- / AC controllers realize computer control in travelling, turning, lifting, inclining and other movements.
- / Regenerative braking is more energy saving and efficiency during truck's deceleration, direction changing, and driving on downwards slope.

## Standard specification

- / 118inch duplex mast
- / Soft landing system
- / Overhead guard
- / Storage compartment
- / Emergency power-off switch
- / USB interface
- / Full AC motor and controller
- / Multi-function color screen combination instrument
- / 2nd valve
- / Dynamic load sensing hydraulic steering gear
- / Panoramic rearview mirror
- / Integrated combination switch
- / DC-DC converter
- / LED front light, turning indicator light, LED rear combination tricolor light
- / Traction pin
- / Back-up alarm
- / OPS system for JC series





## Options

- / 78.7~196.9inch duplex mast
- / 98.4~157.5inch full free duplex mast
- / 169.3~275.6inch full free triplex mast
- / Other length forks
- / Wide fork carriage
- / Wide or higher load backrest
- / Hang on or Integral sideshift
- / Accessories of other specifications
- / Front dual tire
- / Solid Pneumatic Tire
- / Non-marking tyre
- / Suspension seat with armrests
- / Suspension seat with higher OHG
- / Reversing hand grip with horn button
- / Left-right rearview mirror
- / Rear working light
- / Strobe light
- / Battery side removed by forks
- / Battery side roll out by roller
- / High-capacity Chinese battery
- / Charger
- / OPS system
- / Fingertip system

## Battery specification

Battery	Capacity (Ah/5h)	4000lb 48V	5000lb 48V	5000lbL-6000lb 80V	7000lb 80V
Lead-acid	360				
	420				
	480			●	●
	525	●			
	560	○		○	○
	600	○	●	○	○
	700	○	○		

● Battery Std. ○ Battery Opt.



Battery side roll out by roller (Opt.)



Battery side removed by forks (Opt.)



Fingertip system (Opt.)

# X Series 4000~7000lbs Electric Pneumatic Tire Forklift Truck Specification

Distinguishing mark	1.1	Manufacturer				
		HCFA Model			FB20X	FB25X
	1.2	Manufacturer's type designation			CPD20-XC4	CPD25-XC4
	1.3	Drive: electric (battery or mains), diesel, petrol, fuel gas			Electric	Electric
	1.4	Operator type: hand, pedestrian, standing, seated, order-picker			Rider seated	Rider seated
	1.5	Rated capacity/rated load	Q	lb (kg)	4000(1810)	5000(2270)
	1.6	Load centre distance	c	in (mm)	24(600)	24(600)
	1.8	Load distance, centre of drive axle to fork	x	in(mm)	16.8(427)	16.8(427)
	1.9	Wheelbase	y	in(mm)	59.8(1520)	59.8(1520)
Weight	2.1	Service Weight			8047(3650)	9039(4100)
	2.2	Axle loading, laden front/rear			10913(4950)/1543(700)	12820(5815)/1731(785)
	2.3	Axle loading, unladen front/rear			3792(1720)/4255(1930)	4001(1815)/5038(2285)
Tyres, chassis	3.1	Tyres: Solid rubber, Pneumatic, Pneumatic-shaped cushion			Pneumatic	Pneumatic
	3.2	Tyre size, front			23×9-10-18PR	23×9-10-18PR
	3.3	Tyre size, rear			18×7-8-14PR	18×7-8-14PR
	3.5	Wheels, number front / rear (x = driven wheels)			2x2	2x2
	3.6	Tread, front	b10	in (mm)	37.8(960)	37.8(960)
	3.7	Tread, rear	b11	in (mm)	38.6(980)	38.6(980)
	Dimensions	4.1	Tilt of mast/fork carriage forward/backward	$\alpha/\beta$	(°)	6/10
4.2		Height, mast lowered	h1	in (mm)	79.2(2011)	79.2(2011)
4.3		Free lift	h2	in (mm)	5.5(140)	5.5(140)
4.4		Lift	h3	in (mm)	118.1(3000)	118.1(3000)
4.5		Height, mast extended	h4	in (mm)	159.3(4046)	159.3(4046)
4.6		Height of overhead guard (standard cabin)	h6	in (mm)	85.0(2160)	85.0(2160)
4.7		Height of overhead guard (height cabin)	h6	in (mm)	88.2(2240)	88.2(2240)
4.8		Seat height/stand height	h7	in (mm)	42.1(1070)	42.1(1070)
4.12		Coupling height	h10	in (mm)	12.2(311)	12.2(311)
4.19		Overall length	l1	in (mm)	132.5(3365)	134.5(3417)
4.20		Length to face of forks	l2	in (mm)	90.4(2295)	92.4(2347)
4.21		Overall width	b1	in (mm)	46.7(1185)	46.7(1185)
4.22		Fork dimensions	s×e×l	in (mm)	1.6×4.8×42.1(40×122×1070)	1.6×4.8×42.1(40×122×1070)
4.23		Fork carriage DIN 15 173 --- ISO 2328, class/type A,B			ISO 2328 2A	ISO 2328 2A
4.24		Fork-carriage width	b3	in (mm)	39.7(1008)	39.7(1008)
4.25		Distance between fork-arms	b5	in (mm)	8.9-39.7(226-1008)	8.9-39.7(226-1008)
4.31		Ground clearance, laden, below mast	m1	in (mm)	4.3(110)	4.3(110)
4.32		Ground clearance, centre of wheelbase	m2	in (mm)	4.7(120)	4.7(120)
4.34.1		Aisle width for pallets 39.4"x47.3" crossways	Ast	in (mm)	142.4(3617)	145(3682)
4.34.2	Aisle width for pallets 31.5"x47.3" lengthways	Ast	in (mm)	150.3(3817)	152.8(3882)	
4.35	Turning radius	Wa	in (mm)	78.4(1990)	80.9(2055)	
Performance data	5.1	Travel speed, laden/unladen		mph (km/h)	10.6(17)/11.2(18)	10.3(16.5)/10.9(17.5)
	5.2	Lift speed, laden/unladen		fpm (m/s)	71(0.36)/118(0.60)	67(0.34)/118(0.60)
	5.3	Lowering speed, laden/unladen		fpm (m/s)	89(0.45)/98(0.50)	89(0.45)/98(0.50)
	5.6	Max. Drawbar pull, laden/unladen		lbf(N)	3282(14600)/2383(10600)	3282(14600)/2592(11530)
	5.8	Max. gradeability, laden/unladen		%	20/20	19/20
	5.10	Service brake			Hydraulic	Hydraulic
		Parking brake			Mechanical	Mechanical
Electric-engine	6.1	Drive motor rating S2 60 min		HP (kW)	24.1(18)	24.1(18)
	6.2	Lift motor rating at S3 15%		HP (kW)	24.1(18)	24.1(18)
	6.3	Battery acc. to DIN 43531/35/36 A,B,C, no			no	no
	6.4	Battery voltage, nominal capacity K5		V/Ah	48/525	48/600
	6.5	Battery weight		lb (kg)	1845(837)	2019(916)
		Battery dimensions	l×b×h	in (mm)	40.5×22.5×30.9(1028×571×784)	40.5×22.5×30.9(1028×571×784)
		Max. battery weight		lb (kg)	1845(837)	2019(916)
	Min. battery weight		lb (kg)	2454(1113)	2465(1118)	
Addition data	8.1	Controller brand			MOSFET/AC	MOSFET/AC
	10.1	Operating pressure for attachments		psi (bar)	2320(160)	2320(160)
	10.2	Oil volume for attachments		US gal/min(l/min)	17.2(65)	17.2(65)
	10.3	Hydraulic Tank - capacity (drain & refill)		US gal(liter)	7.93(30)	7.93(30)
	10.7	Sound pressure level at the driver's seat		dB (A)	70	70
	10.8	Towing coupling, type DIN 15170		in (mm)	Φ0.95(Φ24) Pin	Φ0.95(Φ24) Pin
	10.9	OPS system			Options	Options

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	FB25XL		FB30X		FB35X
	CPD25-XLC4		CPD30-XC4		CPD35-XC4
	Electric		Electric		Electric
	Rider seated		Rider seated		Rider seated
	5000(2270)		6000(2720)		7000(3175)
	24(600)		24(600)		24(600)
	16.8(427)		17.9(454)		18.5(469)
	65.4(1660)		65.4(1660)		65.4(1660)
	9326(4230)		10384(4710)		11685(5300)
	13217(5995)/1620(735)		15168(6880)/1830(830)		17295(7855)/2083(945)
	4586(2080)/4740(2150)		4795(2175)/5589(2535)		4883(2215)/6801(3085)
	Pneumatic		Pneumatic		Pneumatic-shaped cushion
	23×9-10-18PR		23×9-10-20PR		23×10-12
	18×7-8-14PR		18×7-8-14PR		200/50-10
	2x2		2x2		2x2
	39.8(1010)		39.8(1010)		39.8(1012)
	38.6(980)		38.6(980)		38.6(980)
	6/10		6/10		6/10
	79.2(2011)		79.2(2011)		85.1(2161)
	5.5(140)		5.3(135)		5.3(135)
	118.1(3000)		118.1(3000)		118.1(3000)
	159.3(4046)		163.2(4145)		163.2(4145)
	85.0(2160)		85.0(2160)		85.0(2160)
	88.2(2240)		88.2(2240)		88.2(2240)
	42.1(1070)		42.1(1070)		42.1(1070)
	12.2(311)		12.2(311)		12.2(311)
	138(3505)		140.0(3557)		143.6(3647)
	95.9(2435)		97.9(2487)		101.5(2577)
	48.6(1235)		48.6(1235)		49.6(1260)
	1.6×4.8×42.1(40×122×1070)		1.8×4.9×42.1(45×125×1070)		2.0×4.9×42.1(50×125×1070)
	ISO 2328 2A		ISO 2328 3A		ISO 2328 3A
	39.7(1008)		42.6(1082)		42.6(1082)
	8.9-39.7(226-1008)		9.9-42.6(252-1082)		9.9-42.6(252-1082)
	4.3(110)		4.2(106)		4.2(106)
	4.7(120)		4.7(120)		4.9(125)
	148(3775)		151.5(3849)		153.5(3899)
	156.5(3975)		159.4(4049)		161.4(4099)
	84.6(2148)		86.4(2195)		87.8(2230)
	10.3(16.5)/10.9(17.5)		10.3(16.5)/10.9(17.5)		8.7(14)/9.3(15)
	69(0.35)/108(0.55)		63(0.32)/108(0.55)		59(0.30)/89(0.45)
	89(0.45)/98(0.50)		93(0.47)/93(0.47)		93(0.47)/93(0.47)
	4676(20800)/(16500)		4676(20800)/3912(17400)		4676(20800)/4137(18400)
	20/20		20/20		17/19
	Hydraulic		Hydraulic		Hydraulic
	Mechanical		Mechanical		Mechanical
	24.1(18)		24.1(18)		24.1(18)
	24.1(18)		24.1(18)		24.1(18)
	no		no		no
	80/480		80/480		80/480
	2723(1235)		2723(1235)		2723(1235)
	40.5×28×30.9(1028×571×784)		40.5×28×30.9(1028×571×784)		40.5×28×30.9(1028×571×784)
	2723(1235)		2723(1235)		2723(1235)
	3325(1508)		3325(1508)		3325(1508)
	MOSFET/AC		MOSFET/AC		MOSFET/AC
	2320(160)		2320(160)		2320(160)
	17.2(65)		17.2(65)		17.2(65)
	7.93(30)		7.93(30)		7.93(30)
	70		70		70
	Φ0.95(Φ24) Pin		Φ0.95(Φ24) Pin		Φ0.95(Φ24) Pin
	Options		Options		Options

# 4000~5000lbs X Series Mast Specification

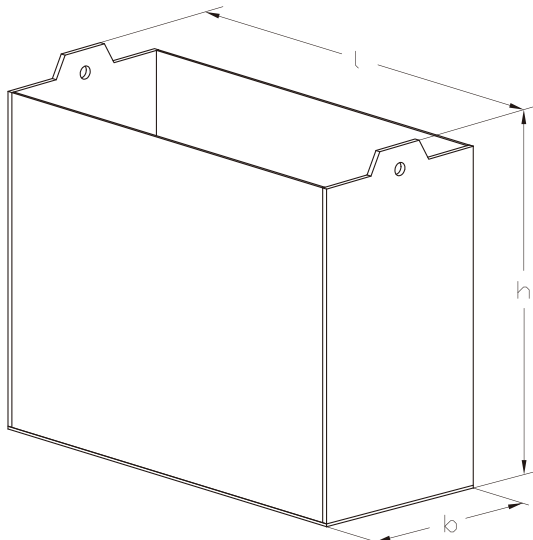
Type	Model	Lifting height	Lowered overall height	Overall height				Free lifting height		Tilting range		Load Capacity					
				With backrest		Without backrest		With backrest	Without backrest	Forward	Backward	Load Capacity at 24 in( 600 mm)			Load Capacity at 24 in( 600 mm)		
				in	in	in	in	in	in	(°)	(°)	Single Tire, Pneumatic Tire			Single Tire, Pneumatic-Shaped Cushion Tire		
				in	in	in	in	in	in			4000lb	5000lb	5000lb L	4000lb	5000lb	5000lb L
Duplex wide view mast	M250	98.4	69.3	139.6	123.7	5.5	5.5	6	6	4000	5000	5000	4000	5000	5000		
	M270	106.3	73.3	147.5	131.6	5.5	5.5	6	6	4000	5000	5000	4000	5000	5000		
	M300	118.1	79.2	159.3	143.4	5.5	5.5	6	10	4000	5000	5000	4000	5000	5000		
	M330	129.9	85.1	171.1	155.2	5.5	5.5	6	10	4000	5000	5000	4000	5000	5000		
	M350	137.8	89.0	179.0	163.1	5.5	5.5	6	10	4000	5000	5000	4000	5000	5000		
	M360	141.7	93.0	182.9	167.0	5.5	5.5	6	10	4000	5000	5000	4000	5000	5000		
	M400	157.5	102.8	198.7	182.8	5.5	5.5	6	10	4000	5000	5000	4000	5000	5000		
	M430	169.3	108.7	210.5	194.6	5.5	5.5	6	6	3880	4776	5000	3880	4776	5000		
	M450	177.2	112.6	218.3	202.5	5.5	5.5	6	6	3781	4577	5000	3781	4577	5000		
Duplex full-free lifting mast	U250	98.4	69.3	139.6	124.5	28.1	43.2	6	6	4000	5000	5000	4000	5000	5000		
	U270	106.3	73.3	147.5	132.4	32.1	47.2	6	6	4000	5000	5000	4000	5000	5000		
	U300	118.1	79.2	159.3	144.2	38.0	53.1	6	10	4000	5000	5000	4000	5000	5000		
	U330	129.9	85.1	171.1	156.0	43.9	59.0	6	10	4000	5000	5000	4000	5000	5000		
	U360	141.7	91.0	182.9	167.8	49.8	64.9	6	10	4000	5000	5000	4000	5000	5000		
	U400	157.5	100.8	198.7	183.6	59.6	74.7	6	10	4000	5000	5000	4000	5000	5000		
Triplex full-free lifting mast	N430	169.3	79.2	210.5	195.4	38.0	53.1	6	6	3681	4577	5000	3681	4577	5000		
	N450	177.2	81.1	218.3	203.3	40.0	55.0	6	6	3582	4079	4577	3582	4079	4577		
	N480	189.0	85.1	230.2	215.1	43.9	59.0	6	6	3482	4000	4079	3482	4000	4079		
	N500	196.9	88.0	238.0	223.0	46.9	61.9	6	6	3084	3283	4000	3084	3283	4000		
	N550	216.5	94.9	257.7	242.6	53.7	68.8	3	6	2388	2487	3283	2388	2487	3283		
	N600	236.2	102.8	277.4	262.3	61.6	76.7	3	6	1791	1990	2487	1791	1990	2487		
	N650	255.9	112.6	297.1	282.0	71.5	86.5	3	6	1194	1691	1990	1194	1691	1990		

With integral sideshifter minus 220lb(100kg).

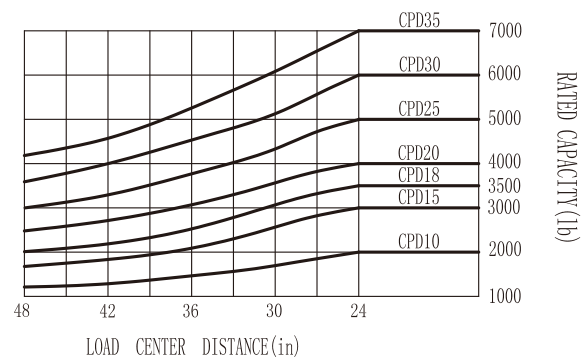
# 6000~7000lbs X Series Mast Specification

Type	Model	Lifting height	Lowered overall height			Overall height				Free lifting height				Tilting range		Load Capacity			
			6000lb		7000lb	With backrest	With backrest	Without backrest	Without backrest	With backrest	With backrest	Without backrest	Without backrest	Forward	Backward	Load Capacity at 24 in( 600 mm)		Load Capacity at 24 in( 600 mm)	
			in	in	in	in	in	in	in	in	in	in	in	in	in	in	in	in	in
			in	in	in	in	in	in	in	in	in	in	in	in	in	in	in	in	in
Duplex wide view mast	M250	98.4	69.3	75.2	143.5	143.5	125.1	129.0	5.3	5.3	5.7	5.7	6	6	6000	/	6000	7000	
	M270	106.3	73.3	79.2	151.4	151.4	133.0	136.9	5.3	5.3	5.7	5.7	6	6	6000	/	6000	7000	
	M300	118.1	79.2	85.1	163.2	163.2	145.2	148.7	5.3	5.3	5.7	5.7	6	10	6000	/	6000	7000	
	M330	129.9	85.1	91.0	175.0	175.0	156.6	160.5	5.3	5.3	5.7	5.7	6	10	6000	/	6000	7000	
	M350	137.8	89.0	94.9	182.9	182.9	164.4	168.4	5.3	5.3	5.7	5.7	6	10	6000	/	6000	7000	
	M360	141.7	93.0	96.9	186.8	186.8	168.4	172.3	5.3	5.3	5.7	5.7	6	10	6000	/	6000	7000	
	M400	157.5	102.8	108.7	202.6	202.6	184.1	188.1	5.3	5.3	5.7	5.7	6	10	6000	/	6000	7000	
	M430	169.3	108.7	114.6	214.4	214.4	195.9	199.9	5.3	5.3	5.7	5.7	6	6	5787	/	5787	7000	
	M450	177.2	112.6	118.5	222.2	222.2	203.8	207.8	5.3	5.3	5.7	5.7	6	6	5688	/	5688	6890	
	M480	189.0	118.5	124.4	234.1	234.1	215.6	219.6	5.3	5.3	5.7	5.7	6	6	5181	/	5181	6790	
	M500	196.9	122.5	128.4	241.9	241.9	223.5	227.4	5.3	5.3	5.7	5.7	6	6	4696	/	4696	6690	
Duplex full-free lifting mast	U250	98.4	71.3	75.8	143.5	143.5	127.0	130.6	26.2	30.7	42.7	43.7	6	6	6000	/	6000	7000	
	U270	106.3	75.2	79.8	151.4	151.4	134.9	138.4	30.2	34.7	46.7	47.6	6	6	6000	/	6000	7000	
	U300	118.1	81.1	85.7	163.2	163.2	146.7	150.2	36.1	40.6	52.6	53.5	6	10	6000	/	6000	7000	
	U330	129.9	87.0	91.6	175.0	175.0	158.5	162.0	42.0	46.5	58.5	59.4	6	10	6000	/	6000	7000	
	U360	141.7	93.0	97.5	186.8	186.8	170.3	173.9	47.9	52.4	64.4	65.4	6	10	6000	/	6000	7000	
	U400	157.5	102.8	107.3	202.6	202.6	186.1	189.6	57.7	62.2	74.2	75.2	6	10	6000	/	6000	7000	
Triplex full-free lifting mast	N430	169.3	81.1	85.1	214.4	214.4	197.9	201.5	36.1	40.0	52.6	53.0	6	6	6000	/	6000	7000	
	N450	177.2	85.1	87.0	222.2	222.2	205.7	209.4	40.0	42.0	56.5	54.9	6	6	5578	/	5578	6790	
	N480	189.0	91.0	93.0	234.1	234.1	217.6	221.2	45.9	47.9	62.4	60.8	6	6	5490	/	5490	6790	
	N500	196.9	94.9	96.9	241.9	241.9	225.4	229.1	49.8	51.8	66.3	64.8	6	6	4784	/	4784	6592	
	N550	216.5	102.8	104.8	261.6	261.6	245.1	248.7	57.7	59.7	74.2	72.6	3	6	3792	/	3792	5798	
	N600	236.2	112.6	114.6	281.3	281.3	264.8	268.4	67.6	69.5	84.1	82.5	3	6	2888	/	2888	4398	
	N650	255.9	118.5	124.4	301.0	301.0	284.5	288.1	73.5	79.4	90.0	92.3	3	6	2403	/	2403	2998	

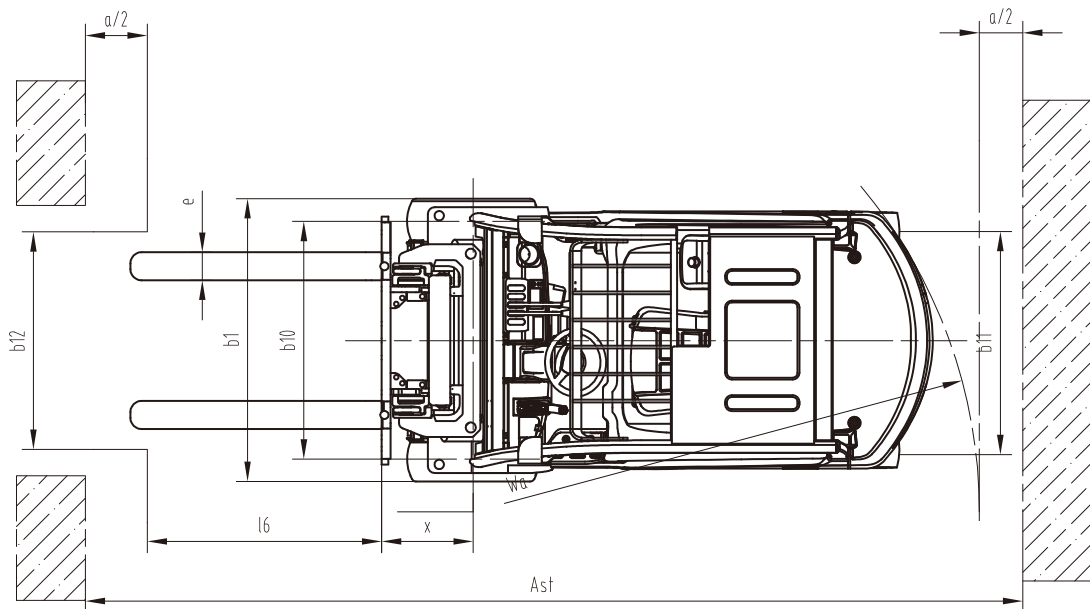
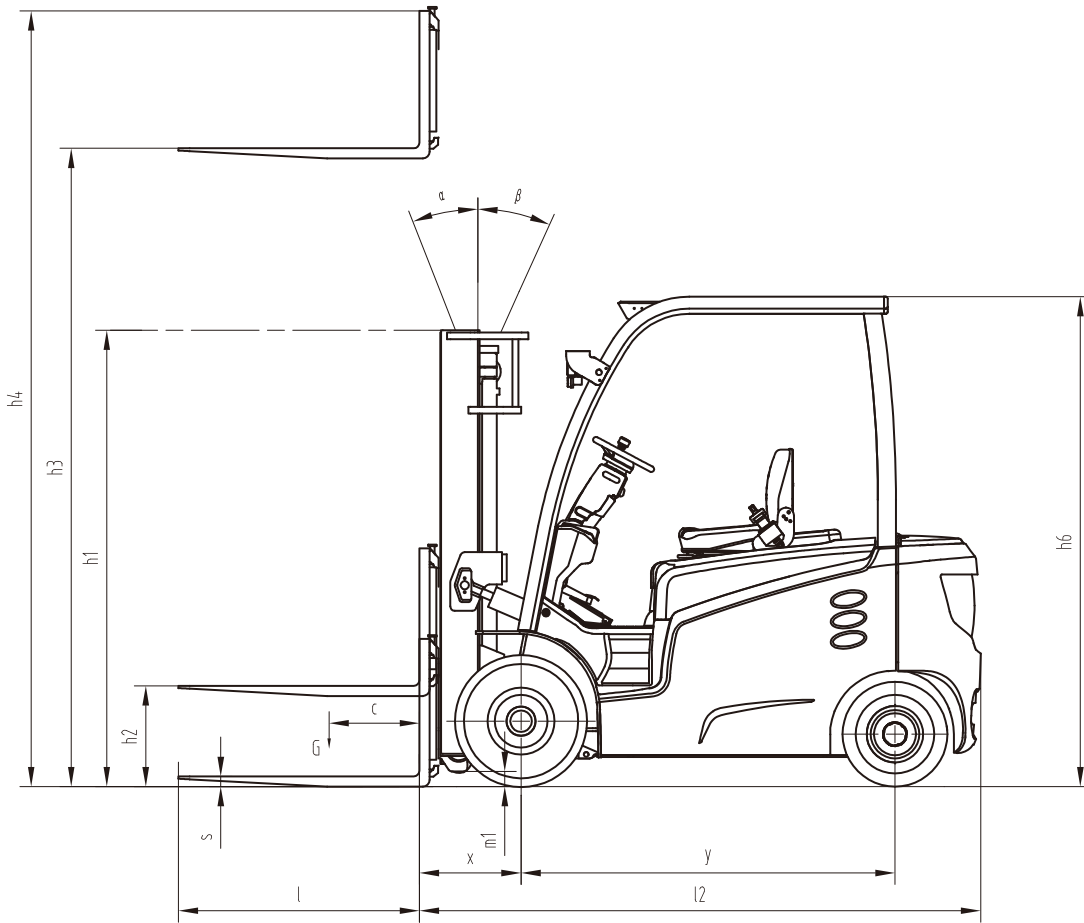
With integral sideshifter minus 220lb(100kg).



RATED CAPACITY AND LOAD DIAGRAM







$A_{st} = l_6 + x + w_a + a$   $l_6$ : Load Length  $a$ : Clearance (7.9inch)



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