



HANGCHA GROUP CO., LTD.

Factory site: 666 Xiangfu Road,
Hangzhou, Zhejiang, China (311305)

Tel: +86-571-88926735 88926755
Fax: +86-571-88926789 88132890

sales@hcforklift.com
www.hcforklift.com



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ISO45001
ISO45001:2018



ISO14001
ISO14001:2015



ISO9001
ISO9001:2015



HANGCHA trucks conform
to the European Safety
Requirements.

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X Series Lithium-ion Narrow Aisle Pantograph Reach Truck

with capacity of 3,000 to 4,500lbs

Making Material Handling Easier
SINCE 1956



EFFICIENT TRUCKS



The 3,000-4,500lb lithium-ion pantograph reach trucks are suitable for operations in narrow aisles and limited spaces. These trucks feature a high lift, large load capacity, pantograph, and a small turning radius. Using their advanced performance and technology, the reach trucks add to the efficiency of operations while maintaining reliability and a high level of safety. The X Series Lithium-ion Narrow Aisle Pantograph Reach Truck is the ideal tool for material handling in warehouses, supermarkets, and workshops.

Appearance

The X Series Lithium-ion Narrow Aisle Pantograph Reach Truck is designed to stack and retrieve goods efficiently in narrow warehouses and at high lift heights while still maintaining a lifting capacity of up to 4,500lbs. The exterior of this forklift is powder coated in a durable, easy to see, green finish that designates it as a lithium-ion model.

Stability

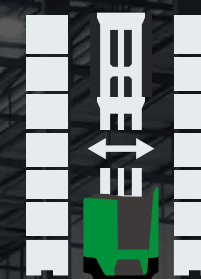
- The battery placed at the bottom of the chassis to create a low center of gravity. This allows the truck to have good stability.
- The four-pivot structure provides stability when the truck is being used to perform a high lift.



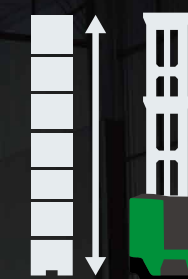
Load Capacity



Reliable & Safe



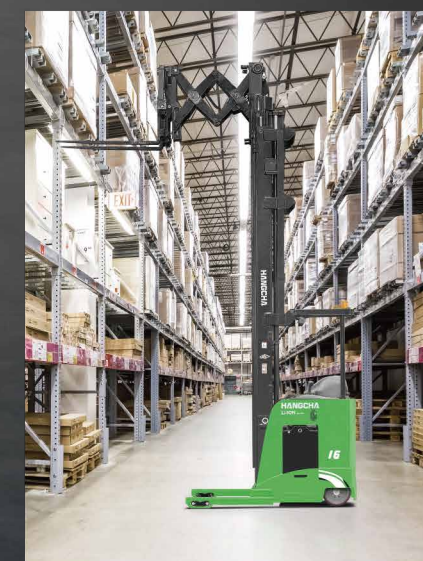
103.2"
Aisle Width



421"
Max. Lift Height

Highly Efficient

- The truck can operate in narrow aisles thanks to its small turning radius.
- Both a high-power pump motor and a silent gear pump (CONCENTRIC) are used to improve the lifting speed, lowering speed, and operating efficiency.
- With several power modes, the truck is able to adapt to different operating conditions.
- The regenerative braking system provides an increase in the truck's operating time.





Comfort

The hanging pedal alleviates operator fatigue when driving for a long period of time by being placed in a comfortable position for the operator.



The operator is able to get on and off the truck more comfortably thanks to the low step-on height of the reach truck's operator compartment.



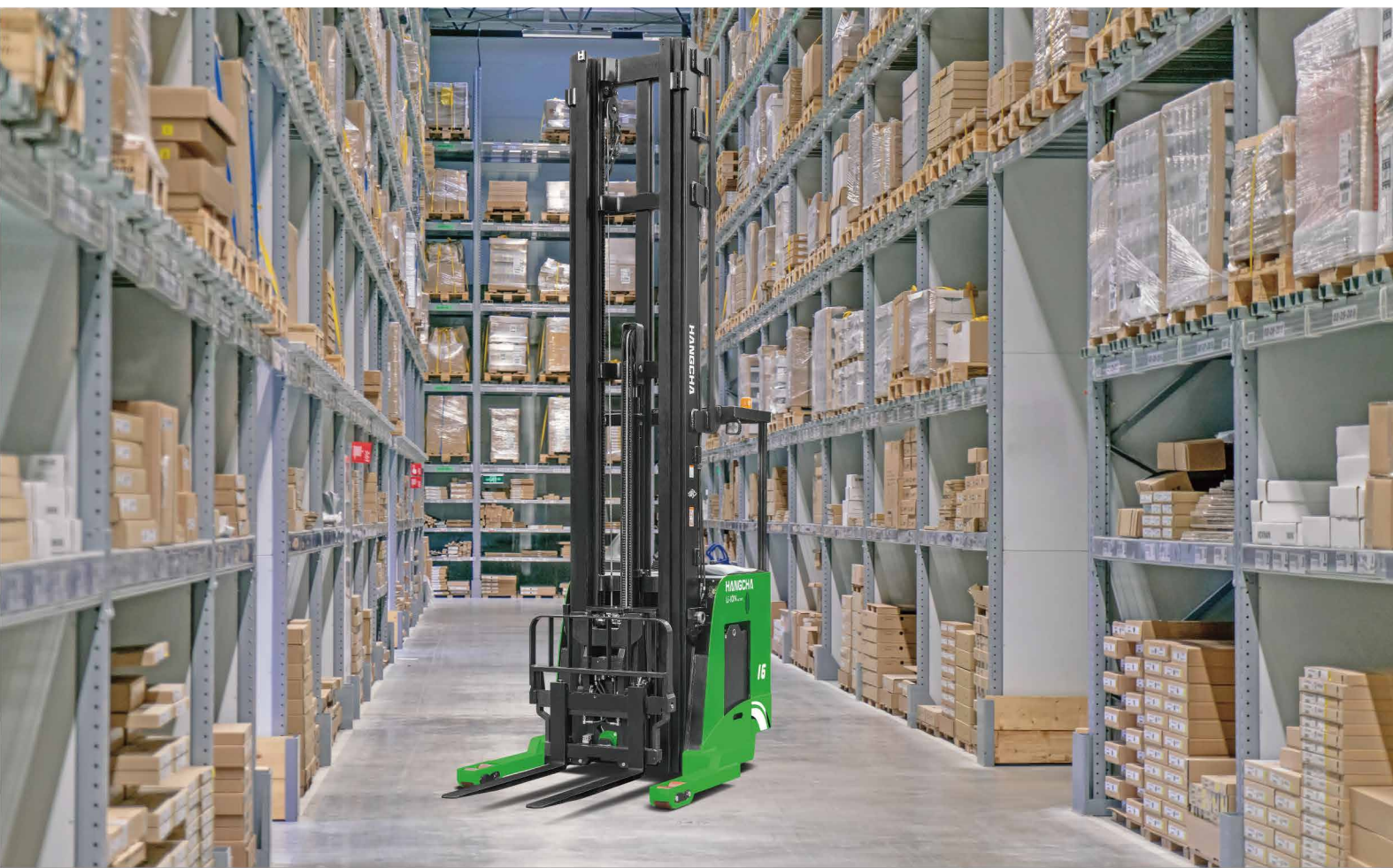
The handle, backrest, instruments, and switches were designed with ergonomics in mind to make operations more comfortable and flexible.



The lifting system is optimized for the operator to have an excellent line of sight through the mast.



The lateral removal of the battery provides easier maintenance and allows for the battery to be swapped out when running in continuous operating conditions.

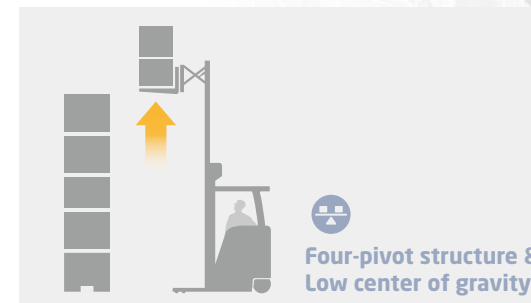


Reliability and Safety

- The four-pivot structure, low center of gravity, and high strength of the main frame components are designed to withstand the maximum load capacity of the reach truck.
- The controller, connectors, battery plug, and cut-off switch are all parts from industry known suppliers to ensure reliability, performance, and ease of service.
- The ZF transmission, SCHABMULLER drive motor, and the efficient AC power system greatly improve the reliability and service life of the narrow aisle reach truck.
- The controller manipulates the truck's steering angle, lifting height, and traveling speed in unison to provide safer operations.



The newly designed, multi-function joystick has a unique shape and angled design helps to minimize hand movement and muscle fatigue.



With the pedal sensing system, the truck can be driven only if the driver stands on the pedal. If the operator takes their foot off the pedal, active braking is initiated to prevent an accident.



The Full Free Lift 3 Stage Mast provides great visibility for the operator and improves operations safety.



Maintenance

- The brushless AC motor is maintenance-free and significantly reduces the total cost of ownership.
- The maintenance hatch opens wide enough to enable easy repair, maintenance, and tuning of the equipment.
- The battery is maintenance-free meaning that the battery does not need to be watered or checked.
- The controller and electrical components are placed together in the chassis and are highly integrated.

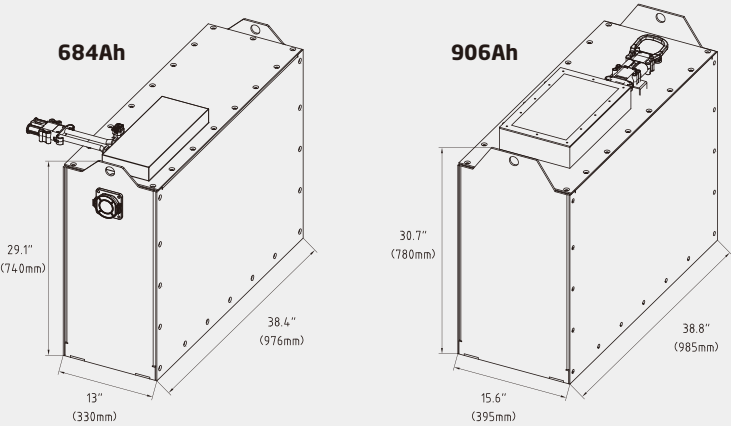


The large-screen LCD display with fault self-diagnosis functions can accurately display information in harsh environments.



CATL Lithium Iron Phosphate Battery Pack

- Integrated Battery Management System (BMS) continually monitors energy management and ensures reliable operation.
- HANGCHA provides these Lithium Iron Phosphate (LiFePO₄) battery packs with up to a 6 year or 12,000 hour warranty.
- See warranty certificate for specific warranty information on the Lithium Iron Phosphate battery packs.



Battery Capacity	Standard	Optional		
[V/Ah] [kW·h]	38.6V/684Ah 26.40kW·h	38.6V/906Ah 34.97kW·h	36V/608Ah 21.89kW·h (EVE)	36V/840Ah 30.24kW·h (EVE)

Standard Charger (48V/200Ah)



Advancement

- The electronic parking brake greatly improves the safety of the operator and the truck.
- The fast lifting and lowering speeds are highly efficient.
- The suspension system and hanging pedals improve operator comfort.
- The integrated mechanical, electrical, and hydraulic controls work in unison to regulate the speed of the truck when traveling and to move the forks more precisely and stably.
- The newly equipped AC control system supports longer working times by precisely managing and adjusting the performance of the truck.



High Efficiency

Standard Specification

- / AC Motor and Controller

/ Multi-Function Instrument Cluster

/ Electric Power Steering System

/ 198" (5.03m) Full Free-Lift Stage 3 Mast

/ Tilting Fork

/ Load Backrest

/ Overhead Guard

/ Soft Landing System
- / Safe Operating System

/ Automatically Decelerates when Cornering

/ Speed Automatic Limit when Mast High Lifting

/ Damper Pedal

/ Adjustable Backrest and Armrest

/ Battery Side Roll Out

/ Multi-Task Control Handle

/ Electro-Hydraulic Proportional Valve System
- / Polyurethane Tire

/ Headlights

/ Clipboard

/ Emergency Cut-Off Switch

/ Electric Horn

/ Static Strap

/ Electric Parking Brake

/ Strobe Light

/ Sideshifter

Options

- / Charger

/ 906Ah Capacity Battery

/ Other Dimensions of Forks

/ Mast Shield

/ Widened or Heightened Load Backrest
- / Blue Light

/ Rear Working Light

/ Cabin Ceiling Light

/ Overhead Fan

/ Camera System
- / 12V Power Plug

/ Freezer

/ Fire Extinguisher

Mast Specification

Triplex full free mast	Lift h ₃	Height, Mast Lowered h ₁	Height, Mast Extended h ₄		Free Lift h ₂	Load capacity @24inch/600mm							
			With Backrest	Without Backrest		CQD14		CQD16		CQD18		CQD20	
						b ₄ <	b ₄ ≥	b ₄ <	b ₄ ≥	b ₄ <	b ₄ ≥	b ₄ <	b ₄ ≥
						42inch/1070mm	42inch/1070mm	42inch/1070mm	42inch/1070mm	42inch/1070mm	42inch/1070mm	42inch/1070mm	42inch/1070mm
						in(mm)	in(mm)	in(mm)	in(mm)	in(mm)	lb/kg	lb/kg	lb/kg
198(5030)	92(2340)	239(6063)	239(6063)	50(1267)	3000(1361)	3000(1361)	3500(1588)	3500(1588)	4000(1814)	4000(1814)	4500(2041)	4500(2041)	
210(5330)	98(2490)	251(6363)	251(6363)	56(1417)	3000(1361)	3000(1361)	3500(1588)	3500(1588)	4000(1814)	4000(1814)	4500(2041)	4500(2041)	
240(6100)	107(2720)	281(7133)	281(7133)	65(1647)	3000(1361)	3000(1361)	3500(1588)	3500(1588)	4000(1814)	4000(1814)	4000(1814)	4000(1814)	
270(6860)	119(3025)	311(7893)	311(7893)	77(1952)	3000(1361)	3000(1361)	3500(1588)	3500(1588)	3500(1588)	3500(1588)	3500(1588)	3500(1588)	
299(7600)	133(3380)	340(8633)	340(8633)	91(2307)	3000(1361)	3000(1361)	3000(1361)	3000(1361)	3000(1361)	3000(1361)	3000(1361)	3000(1361)	

Mast Specification (HEAVY DUTY)

Triplex full free mast	Lift h ₃	Height, Mast Lowered h ₁	Height, Mast Extended h ₄		Free Lift h ₂	Load capacity @24inch/600mm;							
			With Backrest	Without Backrest		CQD14		CQD16		CQD18		CQD20	
						b ₄ <	b ₄ ≥	b ₄ <	b ₄ ≥	b ₄ <	b ₄ ≥	b ₄ <	b ₄ ≥
						42inch/1070mm	42inch/1070mm	42inch/1070mm	42inch/1070mm	42inch/1070mm	42inch/1070mm	42inch/1070mm	42inch/1070mm
						in(mm)	in(mm)	in(mm)	in(mm)	in(mm)	lb/kg	lb/kg	lb/kg
270(6860)	119(3025)	311(7893)	311(7893)	77(1952)	3000(1361)	3000(1361)	3500(1588)	3500(1588)	4000(1814)	4000(1814)	4500(2041)	4500(2041)	
299(7600)	133(3380)	340(8633)	340(8633)	91(2307)	3000(1361)	3000(1361)	3500(1588)	3500(1588)	3835(1750)	3835(1750)	4000(1814)	4000(1814)	
321(8150)	140(3560)	362(9183)	362(9183)	98(2487)	3000(1361)	3000(1361)	3500(1588)	3500(1588)	3638(1650)	3748(1700)	3638(1650)	3748(1700)	
341(8660)	149(3785)	382(9693)	382(9693)	107(2712)	3000(1361)	3000(1361)	3307(1500)	3417(1550)	3307(1500)	3417(1550)	3417(1550)	3500(1588)	
366(9300)	160(4060)	407(10333)	407(10333)	118(2987)	2976(1350)	3000(1361)	3086(1400)	3197(1450)	3086(1400)	3197(1450)	3197(1450)	3307(1500)	
400(10160)	172(4365)	441(11193)	441(11193)	130(3292)	2866(1300)	2976(1350)	2866(1300)	2976(1350)	2866(1300)	2976(1350)	2976(1350)	3086(1400)	
421(10700)	179(4545)	462(11733)	462(11733)	137(3472)	2425(1100)	2646(1200)	2425(1100)	2646(1200)	2425(1100)	2646(1200)	2535(1150)	2756(1250)	
453(11500)	192.5(4890)	493.5(12533)	493.5(12533)	150(3817)	1874(850)	2205(1000)	1874(850)	2205(1000)	1874(850)	2205(1000)	1984(900)	2315(1050)	

X Series Lithium-ion Narrow Aisle Pantograph Single Reach Truck

Distinguishing Marks	1.1	Manufacturer		HANGCHA GROUP CO.,LTD.			
	1.2	Manufacturer's type designation		CQD14-XD3-II	CQD16-XD3-II	CQD18-XD3-II	CQD20-XD3-II
	1.3	Drive: electric		Electric			
	1.4	Operator type		Standing			
	1.5	Rated capacity/rated load	Q (lb/kg)	3000(1361)	3500(1588)	4000(1814)	4500(2041)
	1.6	Load centre distance	c (in\mm)	24(600)			
	1.8	Load distance, centre of drive axle to fork	x (in\mm)	13.4(340)			
	1.9	Wheelbase	y (in\mm)	57.8(1469)①			
	2.1	Service weight (without battery)	lb (kg)	6791(3080)			7253(3290)
Tyres/Chassis	3.1	Tyres: solid rubber, superelastic, pneumatic, polyurethane		Polyurethane			
	3.2	Tyre size, front	in(mm)	5×3.9(Ø127×98)			
	3.3	Tyre size, rear	in(mm)	13.5×5.5(Ø343×140)			
	3.4	Additional wheels(dimensions)	in(mm)	7.9×2.2(Ø200×55)			
	3.5	Wheels, number front/rear (× = driven wheels)		2/2(1x)			
	3.6	Tread, front	b10(in\mm)	b1+5.4"(137mm)			
	3.7	Tread, rear	b11(in\mm)	762.5			
Dimensions	4.1	Tilt of mast/fork carriage forward/backward	α/β(°)	3/4			
	4.2	Height, mast lowered	h1 (in\mm)	92(2340)			
	4.3	Free lift	h2(in\mm)	50(1267)			
	4.4	Lift	h3(in\mm)	198(5030)			
	4.5	Height, mast extended	h4(in\mm)	239(6063)			
	4.7	Height of overhead guard (cabin)	h6(in\mm)	92.5(2350)			
	4.8	Seat height relating to SIP/stand height	h7(in\mm)	9.5(240)			
	4.10	Height of wheel arms	h8(in\mm)	5.1(130)			
	4.19	Overall length	l1(in\mm)	99(2520)①			
	4.20	Length to face of forks	l2(in\mm)	57(1450)①			
	4.21	Overall width	b1(in\mm)	42.5(1080)			
	4.22	Fork dimensions DIN ISO 2331	s/e/l (in\mm)	1.6/4.8/42(40/122/1070) [1.8/4.8/L(45/122/L),L>2000]			
	4.24	Fork-carriage width	b3(in\mm)	35.3(896)			
	4.25	Fork spread	b5(in\mm)	7.9-29.1(200-740)			
	4.26	Distance between wheel arms/loading surfaces	b4(in\mm)	46(1170)[34-50(864-1270), (1"increments)]②			
		Distance between outside wheel arms	b2(in\mm)	b1+10.7"(272mm)			
	4.28	Reach distance	l4(in\mm)	24(610)			
	4.32	Ground clearance, centre of wheelbase	m2(in\mm)	2(50)			
	4.34	Aisle width	Ast(in\mm)	See table 1			
	4.35	Turning radius	Wa(in\mm)	67.8(1722)①			
	4.37	Length across wheel arms	l1(in\mm)	74.7(1898)①			
Performance Data	5.1	Travel speed, laden/unladen	mph km/h	6.5/7.5 10.5/12			
	5.2	Lift speed, laden/unladen	fpm mm/s	78/105 395/535	72/105 365/535	68/105 345/535	65/105 330/535
	5.3	Lowering speed, lade/unladen	fpm mm/s	105/105 535/535			
	5.4	Reaching speed, laden/unladen	fpm mm/s	31/35 160/180			
	5.8	Max. gradeability, laden/unladen	%	10/12			
	5.10	Service brake		Electromagnetic			
		Parking brake		Electromagnetic			
Electric-Engine	6.1	Drive motor rating S1 60 min	hp/kW	8.6(6.4)			
	6.2	Lift motor rating at S1 15 %	hp/kW	17.4(13)			
	6.3	Battery according to DIN 43531/35/36 A, B, C, no		no			
	6.4	Battery voltage/nominal capacity Ks	(V)/(Ah)	38.6/684			
		Battery weight	lb (kg)	280			

Note: ① With min. battery;② Distance between wheel arms is unadjustable.

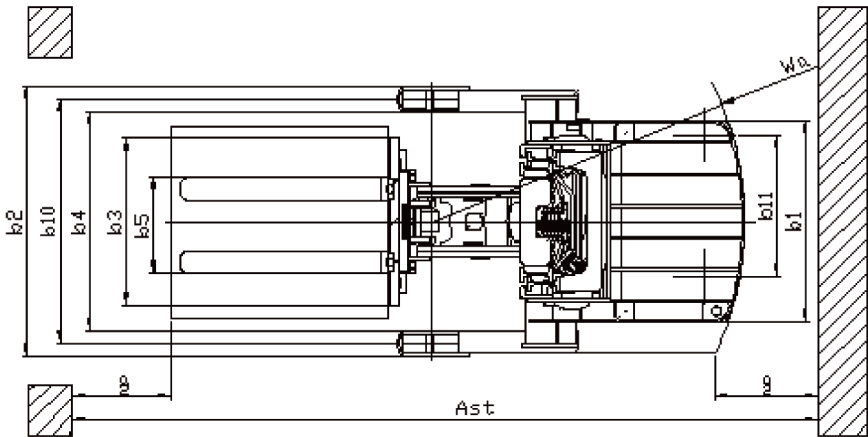
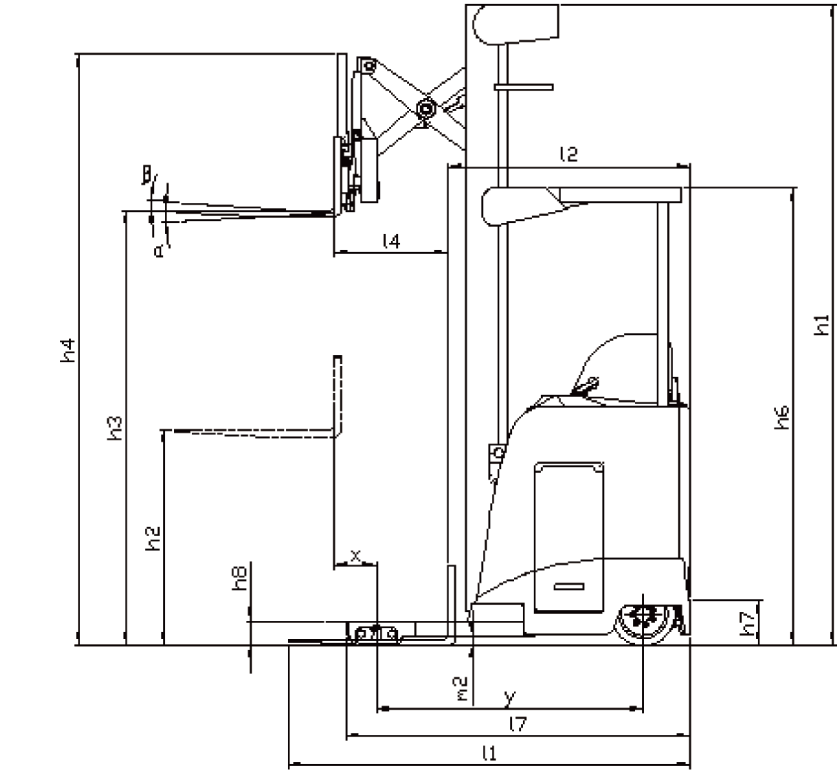
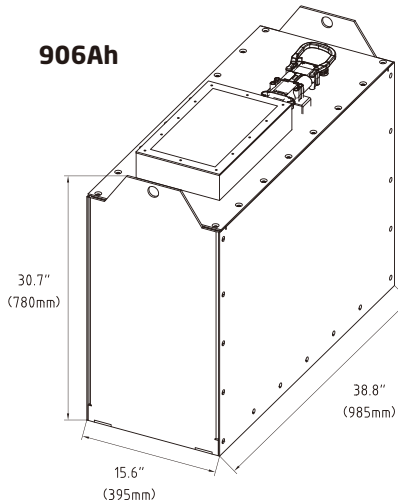
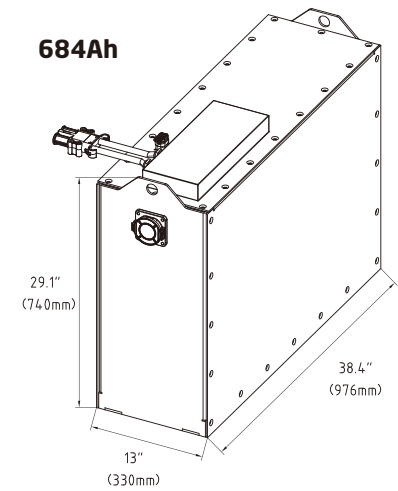
X Series Lithium-ion Narrow Aisle Pantograph Single Reach Truck

Distinguishing Marks	1.1	Manufacturer		HANGCHA GROUP CO.,LTD.			
	1.2	Manufacturer's type designation		CQD14-XC2-II	CQD16-XC2-II	CQD18-XC2-II	CQD20-XC2-II
	1.3	Drive: electric		Electric			
	1.4	Operator type		Standing			
	1.5	Rated capacity/rated load	Q (lb/kg)	3000(1361)	3500(1588)	4000(1814)	4500(2041)
	1.6	Load centre distance	c (in\mm)	24(600)			
	1.8	Load distance, centre of drive axle to fork	x (in\mm)	13.4(340)			
	1.9	Wheelbase	y (in\mm)	57.8(1469)①			
	2.1	Service weight (without battery)	lb (kg)	6791(3080)			7253(3290)
Tyres/Chassis	3.1	Tyres: solid rubber, superelastic, pneumatic, polyurethane		Polyurethane			
	3.2	Tyre size, front	in(mm)	5×3.9(Ø127×98)			
	3.3	Tyre size, rear	in(mm)	13.5×5.5(Ø343×140)			
	3.4	Additional wheels(dimensions)	in(mm)	7.9×2.2(Ø200×55)			
	3.5	Wheels, number front/rear (× = driven wheels)		2/2(1x)			
	3.6	Tread, front	b10(in\mm)	b1+5.4"(137mm)			
	3.7	Tread, rear	b11(in\mm)	762.5			
Dimensions	4.1	Tilt of mast/fork carriage forward/backward	α/β(°)	3/4			
	4.2	Height, mast lowered	h1 (in\mm)	92(2340)			
	4.3	Free lift	h2(in\mm)	50(1267)			
	4.4	Lift	h3(in\mm)	198(5030)			
	4.5	Height, mast extended	h4(in\mm)	239(6063)			
	4.7	Height of overhead guard (cabin)	h6(in\mm)	92.5(2350)			
	4.8	Seat height relating to SIP/stand height	h7(in\mm)	9.5(240)			
	4.10	Height of wheel arms	h8(in\mm)	5.1(130)			
	4.19	Overall length	l1(in\mm)	99(2520)①			
	4.20	Length to face of forks	l2(in\mm)	57(1450)①			
	4.21	Overall width	b1(in\mm)	42.5(1080)			
	4.22	Fork dimensions DIN ISO 2331	s/e/l (in\mm)	1.6/4.8/42(40/122/1070) [1.8/4.8/L(45/122/L),L>2000]			
	4.24	Fork-carriage width	b3(in\mm)	35.3(896)			
	4.25	Fork spread	b5(in\mm)	7.9-29.1(200-740)			
	4.26	Distance between wheel arms/loading surfaces	b4(in\mm)	46(1170)[34-50(864-1270), (1"increments)]②			
		Distance between outside wheel arms	b2(in\mm)	b1+10.7"(272mm)			
	4.28	Reach distance	l4(in\mm)	24(610)			
	4.32	Ground clearance, centre of wheelbase	m2(in\mm)	2(50)			
	4.34	Aisle width	Ast(in\mm)	See table 1			
	4.35	Turning radius	Wa(in\mm)	67.8(1722)①			
	4.37	Length across wheel arms	l1(in\mm)	74.7(1898)①			
Performance Data	5.1	Travel speed, laden/unladen	mph km/h	6.5/7.5 10.5/12			
	5.2	Lift speed, laden/unladen	fpm mm/s	78/105 395/535	72/105 365/535	68/105 345/535	65/105 330/535
	5.3	Lowering speed, lade/unladen	fpm mm/s	105/105 535/535			
	5.4	Reaching speed, laden/unladen	fpm mm/s	31/35 160/180			
	5.8	Max. gradeability, laden/unladen	%	10/12			
	5.10	Service brake		Electromagnetic			
		Parking brake		Electromagnetic			
Electric-Engine	6.1	Drive motor rating S1 60 min	hp/kW	8.6(6.4)			
	6.2	Lift motor rating at S1 15 %	hp/kW	17.4(13)			
	6.3	Battery according to DIN 43531/35/36 A, B, C, no		no			
	6.4	Battery voltage/nominal capacity Ks	(V)/(Ah)	38.6/684			
		Battery weight	lb (kg)	280			

Note: ① With min. battery;② Distance between wheel arms is unadjustable.

Table 1

Battery and compartment size			16.5"	18.5"
6.4	Battery Voltage	V	38.6	
	Battery capacity maximum 5 Hr Rate	Ah	684	906
	Battery Compartment	"X" Max.	in(mm)	38.4(976)
		"Y" Max.	in(mm)	13(330)
		"Z" Max.	in(mm)	29.1(740)
6.5	Minimum Batt.Wt.	lb(kg)	573(260)	683(310)
	Maximum Batt.Wt.	lb(kg)	661(300)	727.5(330)
1.9	Wheelbase	y (in\mm)	57.8(1469)	59.8(1519)
4.37	Length across wheel arms	l ₂ (in\mm)	74.7(1898)	76.7(1948)
4.20	Length to face of forks	l ₂ (in\mm)	57(1450)	59(1500)
4.35	Turning Radius	Wa (in\mm)	67.8(1722)	69.8(1772)
4.34	Ast 40"L(1026mm)×48"W(1220mm) clearance 7.9"	Ast in(mm)	105.24(2673)	107.24(2724)
	Ast 48"L(1220mm)×40"W(1026mm) clearance 7.9"	Ast in(mm)	112.87(2867)	114.88(2918)
	Ast 48"L(1220mm)×32"W(813mm) clearance 7.9"	Ast in(mm)	112.87(2867)	114.88(2918)



$\alpha=7.9in(200mm)$

X Series Lithium-ion Narrow Aisle Pantograph Double Reach Truck

Distinguishing Marks	1.1	Manufacturer		HANGCHA GROUP CO.,LTD.	
	1.2	Manufacturer's type designation		CQD14-XD3-JDI	CQD16-XD3-JDI
	1.3	Drive: electric		Electric	
	1.4	Operator type		Standing	
	1.5	Rated capacity/rated load	Q (lb/kg)	3000(1361)	3500(1588)
	1.6	Load centre distance	c (in\mm)	24(600)	
	1.8	Load distance, centre of drive axle to fork	x (in\mm)	31(786)	
	1.9	Wheelbase	y (in\mm)	62.8(1596)①	
	2.1	Service weight (without battery)	lb (kg)	7067(3205)	7363(3340)
Tyres/Chassis	3.1	Tyres: solid rubber, superelastic, pneumatic, polyurethane		Polyurethane	
	3.2	Tyre size, front	in(mm)	5×3.9(Ø127×98)	
	3.3	Tyre size, rear	in(mm)	13.5×5.5(Ø343×140)	
	3.4	Additional wheels(dimensions)	in(mm)	7.9×2.2(Ø200×55)	
	3.5	Wheels, number front/rear (× = driven wheels)		2/2(1x)	
	3.6	Tread, front	b ₁₀ (in\mm)	b ₁ +5.4"(137mm)	
	3.7	Tread, rear	b ₁₁ (in\mm)	762.5	
Dimensions	4.1	Tilt of mast/fork carriage forward/backward	α/β(°)	3/4	
	4.2	Height, mast lowered	h ₁ (in\mm)	92(2340)	
	4.3	Free lift	h ₂ (in\mm)	50(1267)	
	4.4	Lift	h ₃ (in\mm)	198(5030)	
	4.5	Height, mast extended	h ₄ (in\mm)	239(6063)	
	4.7	Height of overhead guard (cabin)	h ₅ (in\mm)	92.5(2350)	
	4.8	Seat height relating to SIP/stand height	h ₇ (in\mm)	9.5(240)	
	4.10	Height of wheel arms	h ₆ (in\mm)	5.1(130)	
	4.19	Overall length	l ₁ (in\mm)	103.9(2639)①	
	4.20	Length to face of forks	l ₂ (in\mm)	61.8(1569)①	
	4.21	Overall width	b ₇ (in\mm)	42.5(1080)	
	4.22	Fork dimensions DIN ISO 2331	s/e/l (in\mm)	1.6/4.8/42(40/122/1070) [1.8/4.8/l(45/122/l),l>2000]	
	4.24	Fork-carriage width	b ₃ (in\mm)	35.3(896)	
	4.25	Fork spread	b ₅ (in\mm)	7.9-29.1(200-740)	
	4.26	Distance between wheel arms/loading surfaces	b ₄ (in\mm)	46(1170)[34-50(864-1270), (1"increments)]②	
		Distance between outside wheel arms	b ₂ (in\mm)	b ₁ +10.7"(272mm)	
	4.28	Reach distance	l ₄ (in\mm)	42(1067)	
	4.32	Ground clearance, centre of wheelbase	m ₂ (in\mm)	2(50)	
	4.34	Aisle width	Ast(in\mm)	See table 2	
	4.35	Turning radius	Wa(in\mm)	72.8(1849)①	
Performance Data	5.1	Travel speed, laden/unladen	mph km/h	6.5/7.5 10.5/12	
	5.2	Lift speed, laden/unladen	fpm mm/s	78/105 395/535	72/105 365/535
	5.3	Lowering speed, lade/unladen	fpm mm/s	105/105 535/535	
	5.4	Reaching speed, laden/unladen	fpm mm/s	31/35 160/180	
	5.8	Max. gradeability, laden/unladen	%	10/12	
	5.10	Service brake		Electromagnetic	
		Parking brake		Electromagnetic	
Electric-Engine	6.1	Drive motor rating S≥ 60 min	hp/kW	8.6(6.4)	
	6.2	Lift motor rating at S≥ 15 %	hp/kW	17.4(13)	
	6.3	Battery according to DIN 43531/35/36 A, B, C, no		no	
	6.4	Battery voltage/nominal capacity Ks	(V)/(Ah)	38.6/684	
		Battery weight	lb (kg)	280	

Note: ① With min. battery;② Distance between wheel arms is unadjustable.

X Series Lithium-ion Narrow Aisle Pantograph Double Reach Truck

Distinguishing Marks	1.1	Manufacturer		HANGCHA GROUP CO.,LTD.	
	1.2	Manufacturer's type designation		CQD14-XC2-JDI	CQD16-XC2-JDI
	1.3	Drive: electric		Electric	
	1.4	Operator type		Standing	
	1.5	Rated capacity/rated load	Q (lb/kg)	3000(1361)	3500(1588)
	1.6	Load centre distance	c (in/mm)	24(600)	
	1.8	Load distance, centre of drive axle to fork	x (in/mm)	31(786)	
Weight	1.9	Wheelbase	y (in/mm)	62.8(1596)①	
	2.1	Service weight （without battery）	lb (kg)	7067(3205)	7363(3340)
Tyres/Chassis	3.1	Tyres: solid rubber, superelastic, pneumatic, polyurethane		Polyurethane	
	3.2	Tyre size, front	in(mm)	5×3.9(Φ127×98)	
	3.3	Tyre size, rear	in(mm)	13.5×5.5(Φ343×140)	
	3.4	Additional wheels(dimensions)	in(mm)	7.9×2.2(Φ200×55)	
	3.5	Wheels, number front/rear (× = driven wheels)		2/2(1x)	
	3.6	Tread, front	b1α(in\mm)	b1+5.4"(137mm)	
	3.7	Tread, rear	b1γ(in\mm)	762.5	
Dimensions	4.1	Tilt of mast/fork carriage forward/backward	α/β(°)	3/4	
	4.2	Height, mast lowered	h1 (in\mm)	92(2340)	
	4.3	Free lift	h2(in\mm)	50(1267)	
	4.4	Lift	h3(in\mm)	198(5030)	
	4.5	Height, mast extended	h4(in\mm)	239(6063)	
	4.7	Height of overhead guard (cabin)	h6(in\mm)	92.5(2350)	
	4.8	Seat height relating to SIP/stand height	hγ(in\mm)	9.5(240)	
	4.10	Height of wheel arms	h8(in\mm)	5.1(130)	
	4.19	Overall length	l1(in\mm)	103.9(2639)①	
	4.20	Length to face of forks	l2(in\mm)	61.8(1569)①	
	4.21	Overall width	bγ(in\mm)	42.5(1080)	
	4.22	Fork dimensions DIN ISO 2331	s/e/l (in\mm)	1.6/4.8/42(40/122/1070) [1.8/4.8/L(45/122/L),L>2000]	
	4.24	Fork-carriage width	b3(in\mm)	35.3(896)	
	4.25	Fork spread	bγ(in\mm)	7.9-29.1(200-740)	
	4.26	Distance between wheel arms/loading surfaces	b4(in\mm)	46(1170)[34-50(864-1270), (1"increments)]②	
		Distance between outside wheel arms	b2(in\mm)	b1+10.7"(272mm)	
	4.28	Reach distance	lγ(in\mm)	42(1067)	
	4.32	Ground clearance, centre of wheelbase	m2(in\mm)	2(50)	
	4.34	Aisle width	Ast(in\mm)	See table 2	
	4.35	Turning radius	Wa(in\mm)	72.8(1849)①	
	4.37	Length across wheel arms	lγ(in\mm)	79.7(2025)①	
Performance Data	5.1	Travel speed, laden/unladen	mph km/h	6.5/7.5 10.5/12	
	5.2	Lift speed, laden/unladen	fpm mm/s	78/105 395/535	72/105 365/535
	5.3	Lowering speed, lade/unladen	fpm mm/s	105/105 535/535	
	5.4	Reaching speed, laden/unladen	fpm mm/s	31/35 160/180	
	5.8	Max. gradeability, laden/unladen	%	10/12	
	5.10	Service brake		Electromagnetic	
		Parking brake		Electromagnetic	
Electric-Engine	6.1	Drive motor rating S2 60 min	hp/kW	8.6(6.4)	
	6.2	Lift motor rating at S2 15 %	hp/kW	17.4(13)	
	6.3	Battery according to DIN 43531/35/36 A, B, C, no		no	
	6.4	Battery voltage/nominal capacity Ks	(V)/(Ah)	38.6/684	
		Battery weight	lb (kg)	280	

Note: ① With min. battery,② Distance between wheel arms is unadjustable.

Mast Specification

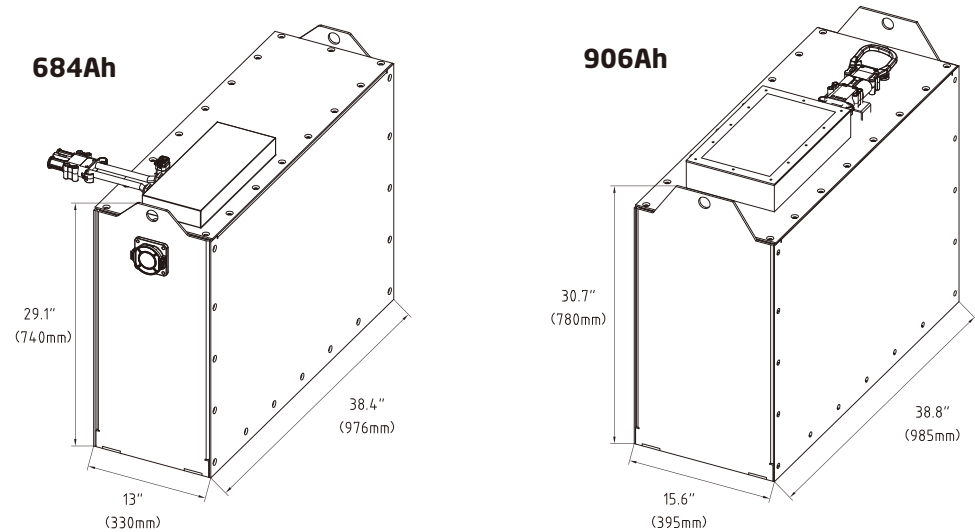
Triplex full free mast	Lift h ₃	Height, Mast Lowered h ₁	Height, Mast Extended h ₄		Free Lift h ₂	Load capacity @24inch/600mm			
			With Backrest	Without Backrest		CQD14		CQD16	
						b ₄ < 42inch/1070mm	b ₄ ≥ 42inch/1070mm	b ₄ < 42inch/1070mm	b ₄ ≥ 42inch/1070mm
	in(mm)	in(mm)	in(mm)	in(mm)	in(mm)	lb/kg	lb/kg	lb/kg	lb/kg
	198(5030)	92(2340)	239(6063)	235(5974)	50(1267)	3000(1361)	3000(1361)	3500(1588)	3500(1588)
210(5330)	98(2490)	251(6363)	247(6274)	56(1417)	3000(1361)	3000(1361)	3263(1480)	3330(1510)	
240(6100)	107(2720)	281(7133)	277(7044)	65(1647)	2822(1280)	2888(1310)	2932(1330)	3000(1361)	
270(6860)	119(3025)	311(7893)	307(7804)	77(1952)	2381(1080)	2490(1130)	2490(1130)	2600(1180)	
299(7600)	133(3380)	340(8633)	336(8544)	91(2307)	1984(900)	2116(960)	2116(960)	2227(1010)	

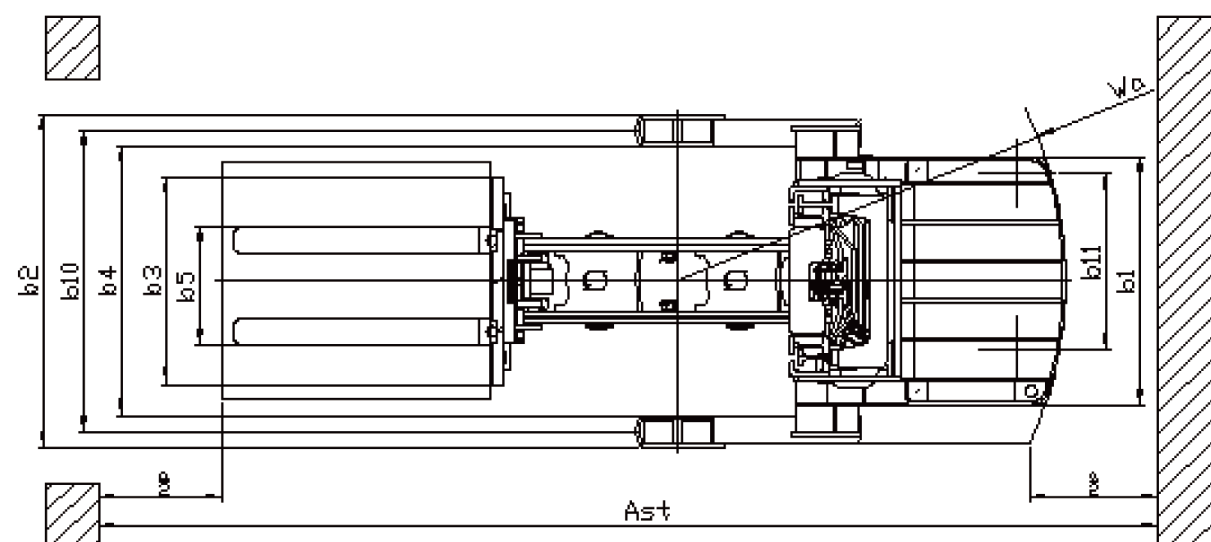
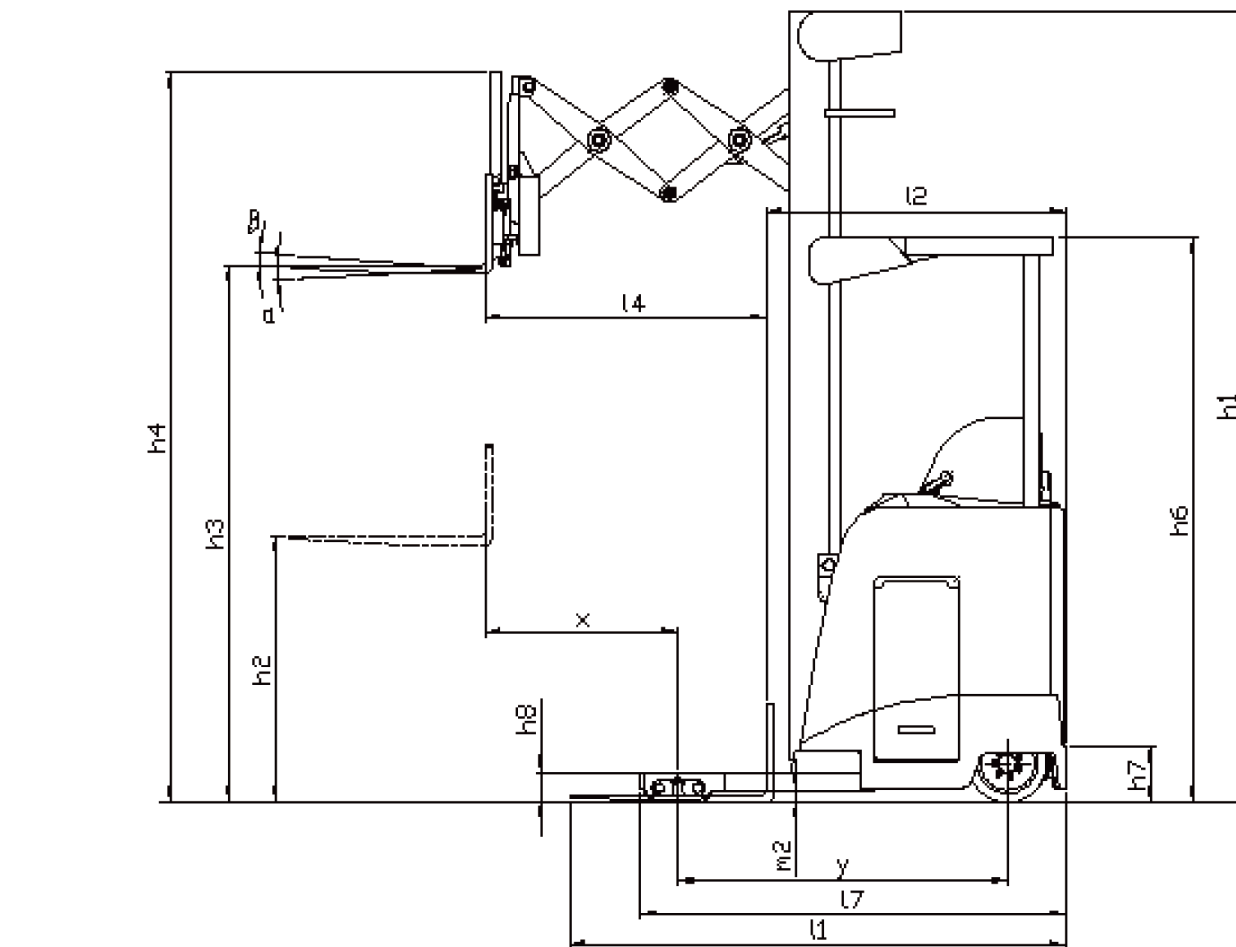
Mast Specification (HEAVY DUTY)

Triplex full free mast	Lift h ₃	Height, Mast Lowered h ₁	Height, Mast Extended h ₄		Free Lift h ₂	Load capacity @24inch/600mm			
			With Backrest	Without Backrest		CQD14		CQD16	
						b ₄ < 42inch/1070mm	b ₄ ≥ 42inch/1070mm	b ₄ < 42inch/1070mm	b ₄ ≥ 42inch/1070mm
	in(mm)	in(mm)	in(mm)	in(mm)	in(mm)	lb/kg	lb/kg	lb/kg	lb/kg
	270(6860)	119(3025)	311(7893)	307(7804)	77(1952)	3000(1361)	3000(1361)	3500(1588)	3500(1588)
299(7600)	133(3380)	340(8633)	336(8544)	91(2307)	3000(1361)	3000(1361)	3417(1550)	3417(1550)	
321(8150)	140(3560)	362(9183)	358(9094)	98(2487)	2888(1310)	3000(1361)	3086(1400)	3307(1500)	
341(8660)	149(3785)	382(9693)	378(9604)	107(2712)	2756(1250)	2888(1310)	2866(1300)	3086(1400)	
366(9300)	160(4060)	407(10333)	403(10244)	118(2987)	2535(1150)	2756(1250)	2646(1200)	2866(1300)	
400(10160)	172(4365)	441(11193)	437(11104)	130(3292)	2205(1000)	2425(1100)	2425(1100)	2535(1150)	
421(10700)	179(4545)	462(11733)	458.5(11644)	137(3472)	1918(870)	2094(950)	2094(950)	2205(1000)	
453(11500)	192.5(4890)	493.5(12533)	490(12444)	150(3817)	1543(700)	1698(770)	1698(770)	1808(820)	

Table 2

Battery and compartment size			16.5”	18.5”
6.4	Battery Voltage	V	38.6	
	Battery capacity maximum 5 Hr Rate	Ah	684	906
	Battery Compartment	“X” Max.	in(mm) 38.4(976)	38.8(985)
		“Y” Max.	in(mm) 13(330)	15.55(395)
		“Z” Max.	in(mm) 29.1(740)	30.7(780)
6.5	Minimum Batt.Wt.	lb(kg)	573(260)	683(310)
	Maximum Batt.Wt.	lb(kg)	661(300)	727(330)
1.9	Wheelbase	y (in\mm)	62.8(1596)	64.8(1646)
4.37	Length across wheel arms	lγ(in\mm)	79.7(2025)	81.7(2075)
4.20	Length to face of forks	l2(in\mm)	61.8(1569)	63.8(1619)
4.35	Turning Radius	Wa (in\mm)	72.8(1849)	74.8(1899)
4.34	Ast 40”L(1026mm)×48”W(1220mm) clearance 7.9”	Ast in(mm)	106.81(2713)	108.82(2764)
	Ast 48”L(1220mm)×40”W(1026mm) clearance 7.9”	Ast in(mm)	114.45(2907)	116.46(2958)
	Ast 48”L(1220mm)×32”W(813mm) clearance 7.9”	Ast in(mm)	114.45(2907)	116.46(2958)





$$\alpha = 7.9 \ln (200 \text{ mm})$$

