



## X Series Narrow Aisle Pantograph Reach Truck

with capacity of 3,000 to 4,500lbs



**HANGCHA**

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ISO14001:2015

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**Making Material Handling Easier**  
SINCE 1956



**HANGCHA**

# EFFICIENT TRUCKS

The 3,000-4,500lb electric reach truck is suitable for operations in narrow aisles and limited spaces. This truck features a high lift, large load capacity, pantograph, and a small turning radius. Using its advanced performance and technology, the reach truck adds to the efficiency of operations while maintaining reliability and a high level of safety. The X Series Narrow Aisle Reach Truck is the ideal tool for materials handling in warehouses, supermarkets, and workshops.

## Appearance

The X Series Narrow Aisle 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, red finish.

## Stability

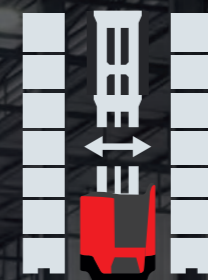
- The battery is placed at the bottom of the chassis to create a low center of gravity. This allows the truck to have good stability.
- The four-pivot structure provides stability when the truck is being used to perform a high lift.



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 low noise gear pump (CONCENTRIC) are used to improve the lifting speed, lowering speed, and its 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.

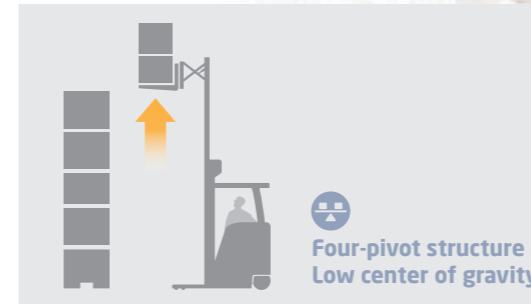
The control handle and backrest can be adjusted according to the operator's optimal driving position.

## 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 multi-function control handle's 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 designed to be removed from side of the truck for easy repair and maintenance.
- The controller and electrical components are placed together in the chassis and are highly integrated.



# 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 time by precisely managing and adjusting the performance of the truck.

Highly Efficient



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

## Standard Specification

- / AC Motor and Controller
- / Multi-Function Instrument Cluster
- / Electric Power Steering System
- / 198" (5.03m) Full Free Lift 3 Stage Mast
- / Tilting Forks
- / Load Backrest
- / Overhead Guard
- / Soft Landing System
- / Safe Operating System
- / Automatic Decelerate Speed at the Corner
- / 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

## Options

- / Charger
- / Large Capacity Battery
- / Other Dimensions of Forks
- / Mast Shield
- / Widened or Heightened Load Backrest
- / Sideshifter
- / Blue Light
- / Rear Working Light
- / Cabin Ceiling Light
- / Operator Fan
- / Camera System
- / 12V Power Supply
- / Freezer
- / Fire Extinguisher

## Mast Specification

	Lift	Height, Mast Lowered	Height, Mast Extended		Free Lift	Load Capacity @24in/610mm			
			With Backrest	Without Backrest		SR14	SR16	SR18	SR20
			in(mm)	in(mm)		lb/kg	lb/kg	lb/kg	lb/kg
<b>Full Free Lift 3 Stage Mast</b>	198(5030)	95(2415)	239(6063)	239(6063)	53(1342)	3000(1360)	3500(1588)	4000(1814)	4500(2041)
	210(5330)	99(2515)	251(6363)	251(6363)	57(1442)	3000(1360)	3500(1588)	4000(1814)	4500(2041)
	240(6100)	107(2718)	281(7133)	281(7133)	65(1645)	3000(1360)	3500(1588)	4000(1814)	4000(1814)
	270(6860)	119(3025)	311(7893)	311(7893)	77(1952)	3000(1360)	3500(1588)	3500(1588)	3500(1588)
	299(7600)	133(3380)	340(8633)	340(8633)	91(2307)	3000(1360)	3000(1360)	3000(1360)	3000(1360)

With integral sideshifter, subtract 220lb(100kg).

## Mast Specification (HEAVY DUTY)

	Lift	Height, Mast Lowered	Height, Mast Extended		Free Lift	Load Capacity @24in/610mm			
			With Backrest	Without Backrest		SR14	SR16	SR18	SR20
			in(mm)	in(mm)		lb/kg	lb/kg	lb/kg	lb/kg
<b>Full Free Lift 3 Stage Mast</b>	270(6860)	119(3025)	311(7893)	311(7893)	77(1952)	3000(1361)	3500(1588)	4000(1814)	4500(2041)
	299(7600)	133(3380)	340(8633)	340(8633)	91(2307)	3000(1361)	3500(1588)	3835(1750)	4000(1814)
	321(8150)	140(3560)	362(9183)	362(9183)	98(2487)	3000(1361)	3500(1588)	3748(1700)	3835(1750)
	341(8660)	149(3785)	382(9693)	382(9693)	107(2712)	3000(1361)	3500(1588)	3527(1600)	3638(1650)
	366(9300)	160(4060)	407(10333)	407(10333)	118(2987)	3000(1361)	3307(1500)	3307(1500)	3417(1550)
	400(10160)	172(4365)	441(11193)	441(11193)	130(3292)	3000(1361)	3086(1400)	3086(1400)	3197(1450)
	421(10700)	179(4545)	462(11733)	462(11733)	137(3472)	2866(1300)	2866(1300)	2866(1300)	2976(1350)

With integral sideshifter, subtract 220lb(100kg).

# X Series Narrow Aisle Single Reach Truck

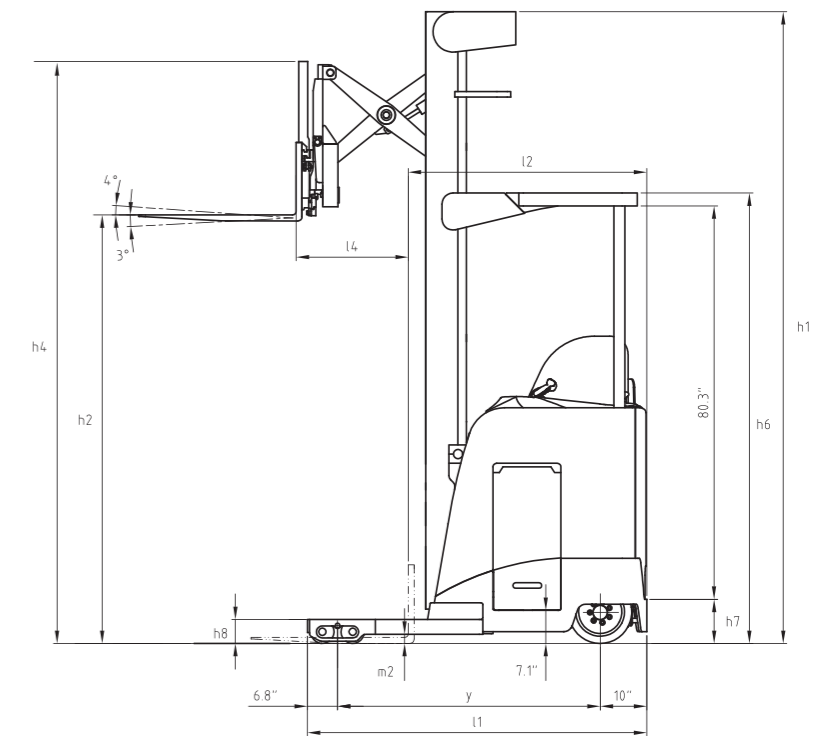
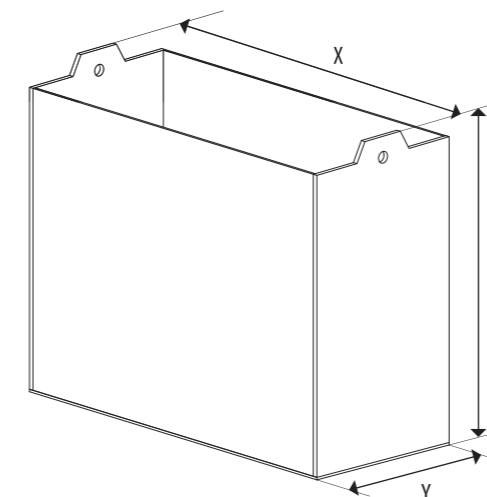
Distinguishing Parts	1.1	HANGCHA GROUP CO.,LTD.				
	1.2	Manufacturer	SR14	SR16	SR18	SR20
1.2	Manufacturer's type designation	CQD14-XD2-J	CQD16-XD2-J	CQD18-XD2-J	CQD20-XD2-J	
1.3	Drive: electric (battery or mains), diesel, petrol, fuel gas	Electric				
1.4	Operator type: hand, pedestrian, standing, seated, order-picker	Stand up				
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 (610)			
1.8	Load distance, centre of drive axle to fork	x (in/mm)	10.8 (274)			
1.9	Wheelbase	y (in/mm)	See table 1			
Weight	2.1	Service Weight, without Battery	5677 (2575)		6140 (2785)	
	2.2	Axle loading, laden front/rear with assemble retracted	6848(3106)/3646(1654) ①	7134(3236)/3801(1724) ①	7423(3367)/3953(1793) ①	8170(3706)/4352(1974) ①
	2.3	Axle loading, unladen front/rear with assemble retracted	2899(1315)/4508(2045) ①		3175(1440)/4938(2240) ①	
Tires, Chassis	3.1	Tires: solid rubber, superelastic, pneumatic, polyurethane	Polyurethane			
	3.2	Wheels size, load	5×3.9(Φ127×99)			
	3.3	Wheels size, drive	13.5×5.5(Φ343×135)			
	3.4	Wheels size, caster	7.9×2.2(Φ200×56)			
Dimensions	4.1	Tilt of mast/fork carriage forward/backward	α / β (°)			3/4
	4.2	Height, mast lowered	h <sub>1</sub> (in/mm)			95(2415)
	4.3	Free lift	h <sub>2</sub> (in/mm)			53(1342)
	4.4	Lift	h <sub>3</sub> (in/mm)			198(5030)
	4.5	Height, mast extended	h <sub>4</sub> (in/mm)			239(6063)
	4.7	Height of overhead guard	h <sub>5</sub> (in/mm)			92.5(2350)
	4.8	Stand height	h <sub>7</sub> (in/mm)			9.5(240)
	4.10	Height of wheel arms	h <sub>8</sub> (in/mm)			5.1(130)
	4.19	Overall length	l <sub>1</sub> (in/mm)			See table 1
	4.20	Length to face of forks	l <sub>2</sub> (in/mm)			See table 1
	4.21	Overall width	b <sub>1</sub> (in/mm)			42.5(1080)
	4.22	Fork dimensions, Std.	s/e/l (in/mm)			1.6/4.8/42(40/122/1070)
	4.22	Fork dimensions, Opt.	s/e/l (in/mm)			1.8/4.8/L(45/122/L), L>1500
	4.24	Fork-carriage width	b <sub>2</sub> (in/mm)			37(942)
	4.25	Distance between fork-arms	b <sub>3</sub> (in/mm)			7.9-29.9(200-760)
4.26	Distance between wheel arms/loading surfaces	b <sub>4</sub> (in/mm)			34-50(864-1270) (1" increments)	
4.28	Reach distance	l <sub>4</sub> (in/mm)			24(610)	
4.31	Ground clearance, laden, below mast	m <sub>1</sub> (in/mm)			2(50)	
4.32	Ground clearance, centre of wheelbase	m <sub>2</sub> (in/mm)			2(50)	
4.34	Aisle width for pallets(clearance 7.9")	A <sub>st</sub> (in/mm)			See table 1	
4.35	Turning radius	W <sub>a</sub> (in/mm)			See table 1	
Performance Data	5.1	Travel speed, laden/unladen	mph			6.5/7.5
			km/h			10.5/12
	5.2	Lift speed, laden/unladen	fpm			78/105
			mm/s			395/535
	5.3	Lowering speed, laden/unladen	fpm			105/105
			mm/s			533/533
5.4	Reach speed,laden/unladen	fpm			31/35	
		mm/s			160/180	
5.7	Gradeability, laden/unladen	%			10/12	
	Parking brake				Electromagnetic	
Electric Motor	6.1	Drive motor rating S2 60 min	hp/kW			8.6(6.4)
	6.2	Lift motor rating at S3 15%	hp/kW			17.4(13)
	6.4	Battery voltage, nominal capacity 14.5"	V/Ah		36/660	/
		Battery voltage, nominal capacity 16.5"	V/Ah		36/770	36/770
		Battery voltage, nominal capacity 18.5"	V/Ah		/	36/880
		Battery voltage, nominal capacity 21.5"	V/Ah		/	36/1100
6.5	Max. battery weight	lb (kg)			See table 1	
	Min. battery weight	lb (kg)			See table 1	
	Battery Compartment Size, l/b/h	in(mm)			See table 1	
Additional Data	10.7	Sound pressure level at the driver's seat	dB (A)			62

Note: ① With min. battery

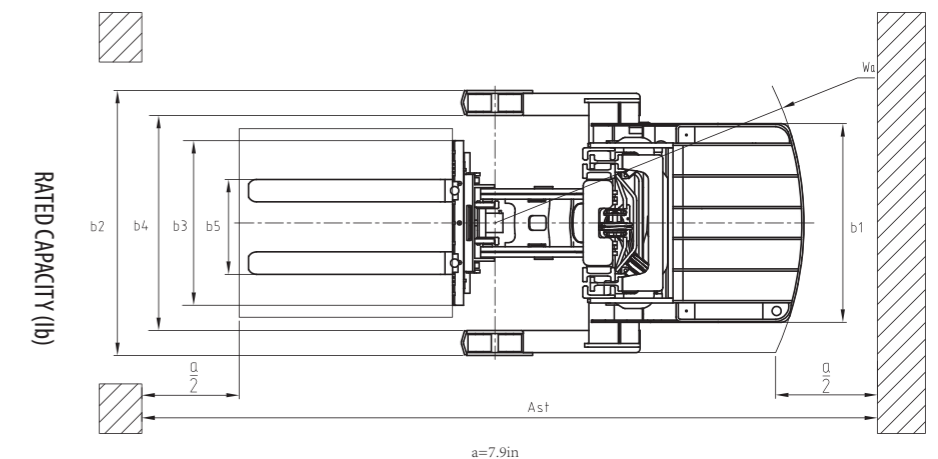
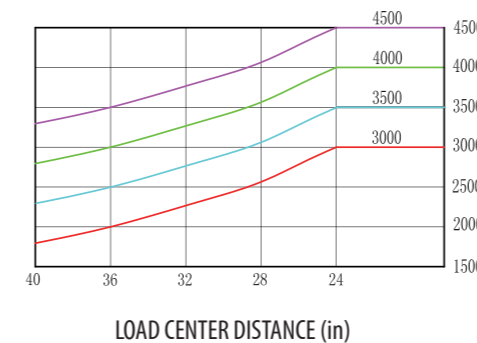
## Table 1

Battery and Compartment Size			14.5"	16.5"	18.5"	21.5"	
6.4	Battery Voltage	V	36	36	36	36	
	Battery capacity maximum 5 Hr Rate	Ah	660	770	880	1100	
	Battery Compartment	"X" Max.	in(mm)	38.8(985)	38.8(985)	38.8(985)	38.8(985)
		"Y" Max.	in(mm)	14.25(362)	16.25(413)	18.25(464)	21.25(540)
		"Z" Max.	in(mm)	30.7(780)	30.7(780)	30.7(780)	30.7(780)
6.5	Minimum Batt.Wt.	lb(kg)	1687(765)	1909(855)	2116(960)	2546(1155)	
	Maximum Batt.Wt.	lb(kg)	1797(815)	2083(935)	2304(1045)	2789(1265)	
1.9	Wheelbase	y (in/mm)	55.79(1417)	57.79(1469)	59.79(1519)	62.79(1595)	
4.19	Overall length	l <sub>1</sub> (in/mm)	72.7(1846)	74.7(1898)	76.7(1948)	79.7(2024)	
4.20	Length to face of forks	l <sub>2</sub> (in/mm)	55(1398) ②	57(1450) ②	59(1500) ②	62(1576) ②	
4.35	Turning Radius	W <sub>a</sub> (in/mm)	65.7(1670)	67.7(1722)	69.7(1772)	72.7(1848)	
4.34	Ast 40"L(1026mm)×48"W(1220mm) clearance 7.9"	Ast in(mm)	103.23(2622) ②	105.24(2673) ②	107.24(2724) ②	109.25(2775) ②	
	Ast 48"L(1220mm)×40"W(1026mm) clearance 7.9"	Ast in(mm)	110.87(2816) ②	112.87(2867) ②	114.88(2918) ②	116.88(2969) ②	
	Ast 48"L(1220mm)×32"W(813mm) clearance 7.9"	Ast in(mm)	110.87(2816) ②	112.87(2867) ②	114.88(2918) ②	116.88(2969) ②	

Note: ② Add 1" (50mm) with sideshift



### RATED CAPACITY AND LOAD DIAGRAM



# X Series Narrow Aisle Double Reach Truck

Distinguishing Marks		HANGCHA GROUP CO.,LTD.		
1.1	Manufacturer			
	HCFA Model	DR14	DR16	
1.2	Manufacturer's Type Designation	CQD14-XD2-JD	CQD16-XD2-JD	
1.3	Drive: electric (battery or mains), diesel, petrol, fuel gas	Electric		
1.4	Operator Type: hand, pedestrian, standing, seated, order-picker	Stand up		
1.5	Rated Capacity/Rated Load	Q (lb/kg) 3000 (1361)	3500 (1588)	
1.6	Load Centre Distance	c (in/mm) 24 (610)		
1.8	Load Distance, centre of drive axle to fork	x (in/mm) 14.2 (360)		
1.9	Wheelbase	y (in/mm) See table 2		
Weight				
2.1	Service Weight, without Battery	lb (kg) 5952(2700)	6062(2750)	
2.2	Axle Loading, laden front/rear with assemble retracted	lb (kg) 6702(3040)/4068(1845) ①	7121(3230)/3891(1765) ①	
2.3	Axle Loading, unladen front/rear with assemble retracted	lb (kg) 3009(1365)/4674(2120) ①	3120(1415)/4806(2180) ①	
Tires & Chassis				
3.1	Tires: solid rubber, superelastic, pneumatic, polyurethane	Polyurethane		
3.2	Wheel Size, load	in(mm) 5×3.9(Ø127×99)		
3.3	Wheel Size, drive	in(mm) 13.5×5.5(Ø343×135)		
3.4	Wheel Size, caster	in(mm) 7.9×2.2(Ø200×56)		
Dimensions				
4.1	Tilt of Mast/Fork Carriage Forward/Backward	α / β (°) 3/4		
4.2	Height, mast lowered	h1 (in/mm) 95(2415)		
4.3	Free Lift	h2 (in/mm) 53(1342)		
4.4	Lift	h3 (in/mm) 198(5030)		
4.5	Height, mast extended	h4 (in/mm) 239(6063)		
4.7	Height of Overhead Guard	h5 (in/mm) 92.5(2350)		
4.8	Stand Height	h6 (in/mm) 9.5(240)		
4.10	Height of Wheel Arms	h7 (in/mm) 5.1(130)		
4.19	Overall Length	l1 (in/mm) See table 2		
4.20	Length to Face of Forks	l2 (in/mm) See table 2		
4.21	Overall Width	b1 (in/mm) 42.5(1080)		
4.22	Fork Dimensions, Std.	s/e/l (in/mm) 1.6×4.8×42(40×122×1070)		
	Fork Dimensions, Opt.	s/e/l (in/mm) 1.8×4.8×L(45×122×L),L>2000		
4.24	Fork-Carriage Width	b2 (in/mm) 37(942)		
4.25	Distance Between Fork-Arms	bs (in/mm) 7.9-29.9(200-760)		
4.26	Distance Between Wheel Arms/Loading Surfaces	bx (in/mm) 34-50(864-1270)(1" increments)		
4.28	Reach Distance	lx (in/mm) 42(1067)		
4.31	Ground Clearance, laden, below mast	m (in/mm) 2(50)		
4.32	Ground Clearance, centre of wheelbase	m2 (in/mm) 2(50)		
4.34	Aisle Width for Pallets (clearance 7.9")	Ast (in/mm) See table 2		
4.35	Turning Radius	Wa (in/mm) See table 2		
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	
5.3	Lowering Speed, laden/unladen	fpm mm/s	105/105 535/535	
5.4	Reach Speed,laden/unladen	fpm mm/s	31/35 160/180	
5.7	Gradeability, laden/unladen	%		
	Parking Brake	Electromagnetic		
Electric Motor				
6.1	Drive Motor Rating S2 60 min	hp/kW	8.6(6.4)	
6.2	Lift Motor Rating at S3 15%	hp/kW	17.4(13)	
6.4	Battery Voltage, nominal capacity 14.5"	V/Ah	36/660 / 36/770	
	Battery Voltage, nominal capacity 16.5"	V/Ah	36/770 / 36/880	
	Battery Voltage, nominal capacity 18.5"	V/Ah	/ / 36/1100	
	Battery Voltage, nominal capacity 21.5"	V/Ah	/ /	
	Max. Battery Weight	lb (kg)	See table 2	
	Min. battery weight	lb (kg)	See table 2	
	Battery Compartment Size, l/b/h	in(mm)	See table 2	
Additional Data				
10.7	Sound Pressure Level at the Driver's Seat	dB (A)	62	

Note: ① With min. battery

# Mast Specification

Full Free Lift 3 Stage Mast	Lift	Height, Mast Lowered	Height, Mast Extended		Free Lift	Load Capacity @1067mm/42inch	
			With Backrest	Without Backrest		DR14	DR16
	in(mm)	in(mm)	in(mm)	in(mm)	in(mm)	lb/kg	lb/kg
198(5030)	95(2415)	239(6063)	239(6063)	53(1342)	3000(1361)	3500(1588)	
210(5330)	99(2515)	251(6363)	251(6363)	57(1442)	3000(1361)	3330(1510)	
240(6100)	107(2718)	281(7133)	281(7133)	65(1645)	2888(1310)	3000(1360)	
270(6860)	119(3025)	311(7893)	311(7893)	77(1952)	2490(1130)	2600(1180)	
299(7600)	133(3380)	340(8633)	340(8633)	91(2307)	2116(960)	2227(1010)	

With integral sideshifter, subtract 220lb(100kg).

# Mast Specification (HEAVY DUTY)

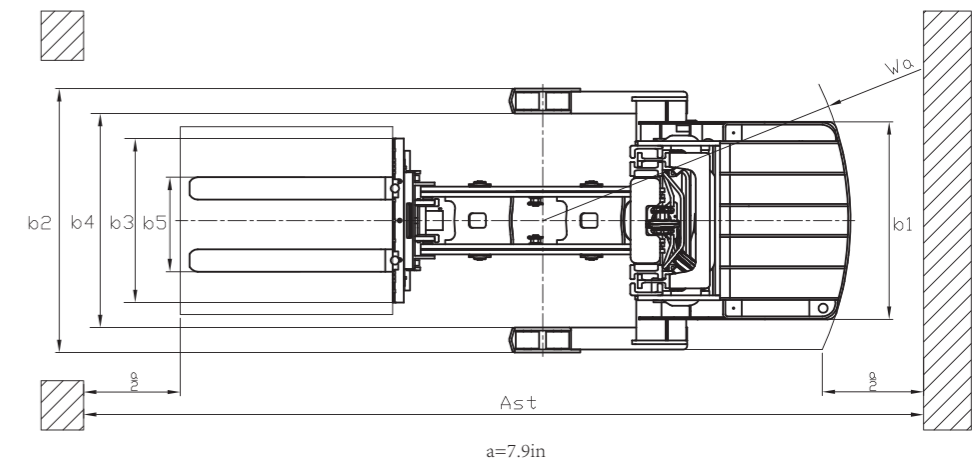
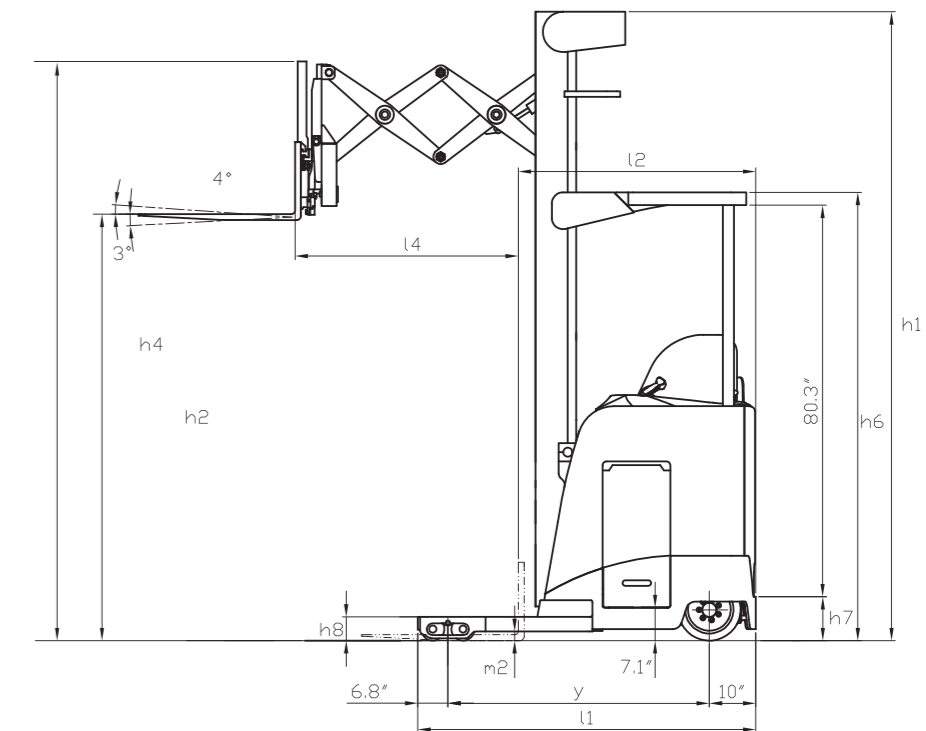
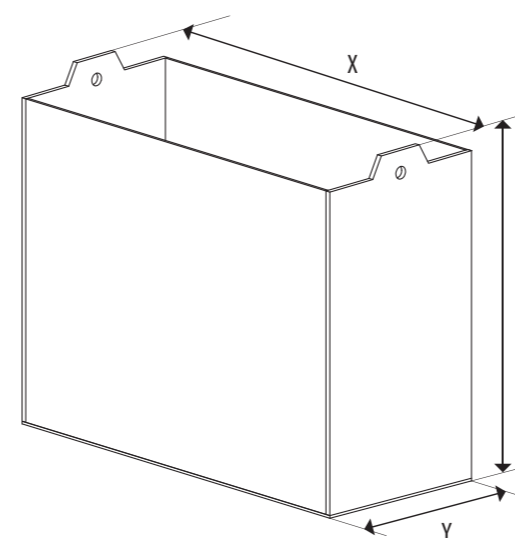
Full Free Lift 3 Stage Mast	Lift	Height, Mast Lowered	Height, Mast Extended		Free lift	Load Capacity @1067mm/42inch	
			With Backrest	Without Backrest		DR14	DR16
	in(mm)	in(mm)	in(mm)	in(mm)	in(mm)	lb/kg	lb/kg
270(6860)	119(3025)	311(7893)	311(7893)	77(1952)	3000(1361)	3500(1588)	
299(7600)	133(3380)	340(8633)	340(8633)	91(2307)	3000(1361)	3417(1550)	
321(8150)	140(3560)	362(9183)	362(9183)	98(2487)	3000(1361)	3307(1500)	
341(8660)	149(3785)	382(9693)	382(9693)	107(2712)	3000(1361)	3197(1450)	
366(9300)	160(4060)	407(10333)	407(10333)	118(2987)	2866(1300)	2976(1350)	
400(10160)	172(4365)	441(11193)	441(11193)	130(3292)	2646(1200)	2756(1250)	
421(10700)	179(4545)	462(11733)	462(11733)	137(3472)	2315(1050)	2425(1100)	

With integral sideshifter, subtract 220lb(100kg).

# Table 2

Battery and Compartment Size			14.5"	16.5"	18.5"	21.5"	
6.4	Battery Voltage	V	36	36	36	36	
	Battery Capacity Maximum 5 Hr Rate	Ah	660	770	880	1100	
	Battery Compartment	"X" Max.	in(mm)	38.8(985)	38.8(985)	38.8(985)	38.8(985)
"Y" Max.		in(mm)	14.25(362)	16.25(413)	18.25(464)	21.25(540)	
"Z" Max.		in(mm)	30.7(780)	30.7(780)	30.7(780)	30.7(780)	
6.5	Minimum Battery Weight	lb(kg)	1687(765)	1909(855)	2116(960)	2546(1155)	
	Maximum Battery Weight	lb(kg)	1797(815)	2083(935)	2304(1045)	2789(1265)	
1.9	Wheelbase	y (in/mm)	60.79(1544)	62.79(1596)	64.79(1646)	67.79(1722)	
4.19	Overall Length	l1 (in/mm)	75.7(1973)	77.7(2025)	79.7(2075)	82.7(2101)	
4.20	Length to Face of Forks	l2 (in/mm)	62.6(1589) ②	64.6(1641) ②	67.6(1691) ②	67.6(1717) ②	
4.35	Turning Radius	Wa (in/mm)	70.7(1797)	72.7(1849)	74.7(1899)	77.7(2025)	
	Ast 40"L(1026mm)×48"W(1220mm) clearance 7.9"	Ast in(mm)	104.8(2662) ②	106.81(2713) ②	108.82(2764) ②	110.83(2815) ②	
		Ast 48"L(1220mm)×40"W(1026mm) clearance 7.9"	Ast in(mm)	112.44(2856) ②	114.45(2907) ②	116.46(2958) ②	118.46(3009) ②
		Ast 48"L(1220mm)×32"W(813mm) clearance 7.9"	Ast in(mm)	112.44(2856) ②	114.45(2907) ②	116.46(2958) ②	118.46(3009) ②

Note: ② Add 1" (50mm) with sideshift



# RATED CAPACITY AND LOAD DIAGRAM

